

The Chess Detective® Presents



Chess Endgame Workbook

Acquiring Skills to Win Close Games



TODD BARDWICK

National Chess Master

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Acquiring Skills to Win Close Games



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Chess Detective Press

Illustrations by John Weiss and Kevin Hempstead

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INTRODUCTION

The third World Champion, José Raúl Capablanca, said “In order to improve your game, you must study the endgame before everything else, for whereas the endings can be studied and mastered by themselves, the middle game and the opening must be studied in relation to the endgame.”

The endgame is the third and final phase of the game; if you make a mistake here, you may not have enough time to recover.

The endgame has arrived when material is greatly reduced, allowing the king to enter the game without fear of falling into a mating net.

Knowing if an endgame position is winning, drawing, or losing will help guide you in the middlegame.

Thousands of known endgame positions favor one side or the other. These are theoretical and instructive positions with a large body of supporting work.

My goal is to present typical positions and practical examples for the intermediate-level player looking to improve over the board play without going into the minute details required for master-level players. There is a huge volume of knowledge available and excellent books written with very specific endgame situations geared toward high rated players.

The player who wins the game is often the one who recognizes the theoretical win and can steer the game in that direction.

Because of the sheer complexity of the endgame, chess engines have made significant contributions to endgame theory.

An important decision that influences endgame strategy is whether you are playing for a win or draw. If your position is worse, drawing is better than losing.

As pieces are exchanged, every endgame moves closer to a king and pawn ending.

A question you should be constantly asking yourself in this phase of the game is, “If all of the pieces are traded off, who wins the king and pawn endgame?”

When you are ahead in material or have the superior position, referred to as the *strong side*, you generally want to trade pieces, not pawns, to simplify the game.

If you are behind in material or with the inferior position, referred to as the *weak side*, you generally want to trade pawns with the goal of eliminating all of your opponent’s pawns, which have the potential to become future queens.

The player who is losing generally wants to keep pieces on the board in order to create complications and opportunities for the opponent to make a mistake. Avoid trading down into a losing king and pawn endgame; with more pieces on the board and best play, drawing chances increase.

Making progress toward a winning position is a goal for the strong side in the endgame; if the weak side can prevent progress from being made, the game is drawn.

Deep calculation of forced sequences, like accurately calculating pawn races, is critical in the endgame.

Every tempo can be extremely important and exact calculation often makes a difference in the outcome of the game. Sometimes you need to lose a tempo to put your opponent in zugzwang or avoid your opponent putting you in zugzwang.

Since most of the pieces have been captured and there are fewer legal moves in the endgame, sometimes you can use the process of elimination to determine the best move.

In many endgames, the king is the most powerful piece. While the king cannot be exchanged, the fighting value of the king in the endgame is about four pawns, between the value of a minor piece and a rook.

Endgame positions without pawns are fairly rare.

Both players should strive to create passed pawns, since a pawn must become passed before it can promote.

Pawn promotion is a central theme in the endgame. Whether or not one side or the other, or both, can promote a pawn is often critical. The player who promotes first often wins the game.

In general, the mobility of pawns and how far they are advanced on the board is more important than how many pawns there are. Quality is more important than quantity.

When passed pawns are blocked by the defender's king, winning chances are diminished and sometimes even vanish.

Long-range pieces are benefited when there are pawns on both sides of the board and the position is open. General endgame principles should be followed, but, of course, there are often exceptions to the rule.

It is assumed the reader is already proficient in basic checkmates like king and queen vs. king, king and rook vs. king, and queen-rook/rook-rook roler mates. Also, the reader should be familiar with general chess terms as well as the common types of draws, particularly insufficient mating material, stalemate, and threefold repetition.

Like other workbooks in the Chess Detective series, this book is divided into ten lessons.

Lessons 1 and 2 cover king and pawn endings.

Lesson 3 is about creating passed pawns.

Lesson 4 presents strategies to promote passed pawns.

Lesson 5 is about activating and centralizing the king.

Lesson 6 is about simplifying to an endgame that is easier to win.

Lesson 7 discusses ways to salvage a draw when you are losing.

Lesson 8 covers minor piece endings with bishops and knights.

Lesson 9 covers rook endings.

Lesson 10 covers queen endings.

Appendix A is a summary of chess endgame guidelines and general principles. As you go through the list, think of it as a checklist to see what you are doing correctly and what items need work.

Appendix B addresses what a chess player should be thinking about during the game when it is their move and when it is the opponent's move. These steps will structure your thoughts and keep your mind thinking in an efficient, organized way.

The solutions to the problems at the end of each lesson are explained in detail in **Appendix C**. Each lesson contains ten Basset Hound and ten Chess Detective problems. Reading through the detailed solutions carefully is a great learning opportunity. For most of the problems, the complete answer is much longer than the answer space provided. When this is the case, write your answer on a separate piece of paper.

If you are a novice player up to an intermediate-level tournament player, start with the easier Basset Hound problems, designated with the following symbol:



Intermediate to advanced-level tournament players can move on and solve the harder Chess Detective problems, designated with this symbol:



If you are a chess teacher, you can create a lesson plan for your class or private student by selecting example problems from the book.

Chess books can be intimidating to read. One of the goals of this book is to give you lots of information in a format that is easy to read and understand. This book and the other books in the Chess Detective Series are written in a workbook form, allowing the improving player the opportunity to work through problems on their own before looking up solutions, thereby learning by doing as opposed to merely reading examples.

Throughout the book, the main lines will be in **bold** print, with analysis of variations in regular font.

You should have a chess set with you as you play through the variations in this workbook – many will be too long or complicated to follow in your head without a set. Take your time to understand and learn the endgame principles; don't rush through the analysis to quickly get to the next problem.

In many cases I will play out the games all the way to mate for the benefit of the less-experienced readers. Also, I will try to include as many relevant possible variations (of course every possible variation cannot be discussed) in analyzing the positions, hopefully without making it too complex for the reader to follow. And remember that in a given position, there isn't always necessarily one best move, but possibly several good moves that are close in strength.

Chess endgames can be incredibly complex; extensive volumes have been written on them and there is no way to address all possible situations in one book. I will show the best win or most efficient win, not necessarily all the winning variations, in an attempt to present the most basic principles and themes that will help the amateur tournament player. The reader should focus on the general concepts which can then be applied to their own games.

The glossary in the back of the book gives a quick reference for chess terms and words that you may not know.

Finally, I would like to thank the people who helped make *Chess Endgame Workbook* a success.

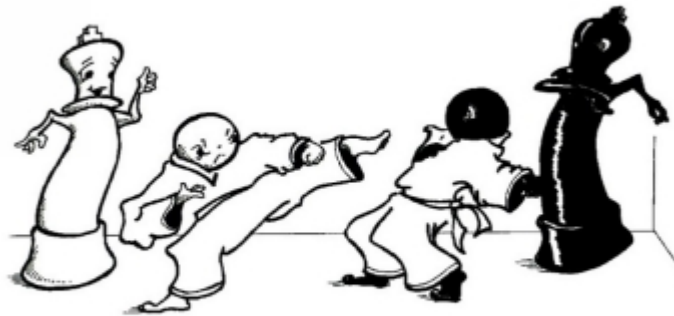
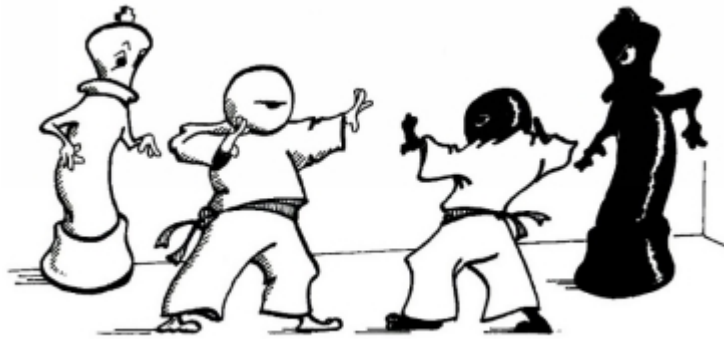
For proofreading and making suggestions on how to improve the book, I would like to thank David Costantino and Alan Bardwick.

Finally, I would like to thank the illustrators, John Weiss and Kevin Hempstead, for the clever and entertaining illustrations they created for the book.

Best wishes in your chess endeavors,

Todd Bardwick
National Chess Master

KING AND PAWN ENDINGS

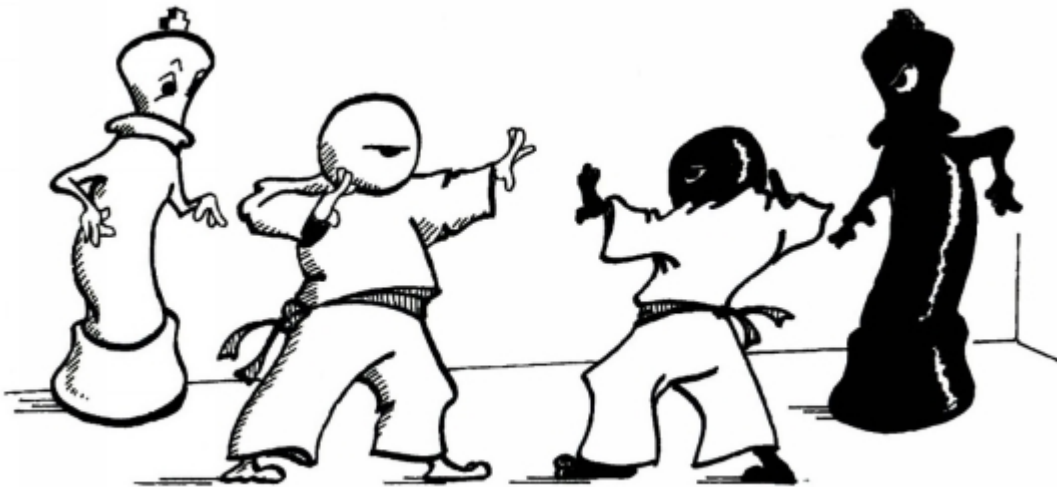


“With every step nearer the endgame the power of the king increases. You should throw him without fear for his safety where the battle is thickest.”

Aaron Nimzowitsch

LESSON 1

BASIC KING AND PAWN ENDINGS



“Pawn endings are to chess what putting is to golf.”

C. J. S. Purdy



Since the game progresses toward a king and pawn ending as pieces are exchanged, king and pawn endings are the most basic of all chess endings.

Care must be taken when analyzing these positions, since having a king or pawn on the wrong square at the wrong time can make the difference between winning and losing.

In Lesson 1, we will examine the important endgame concepts of the square of the pawn, zugzwang, opposition, and how rook pawns differ from non-rook pawns.

These common endgame themes will reoccur as we examine more complex endings later in the book.

The *square of the pawn* concept involves the race between a passed pawn and the defending king to the promotion square.

Zugzwang is when a player is forced to make a move, resulting in an undesirable outcome.

The *opposition* occurs when the kings have an odd number of squares separating them, most often occurring when they are close to critical pawns.

Finally, we will examine rook pawns, the pawns on the edge of the board that start the game in front of the rooks on the a- and h-files.

These pawns are unique and typically offer greater drawing chances for the weak side because of the potential of stalemate in the corner of the board on the promotion square.

Promoting a pawn

A pawn is sufficient mating material to win the game because it can promote to a queen or rook.

Promoting a pawn is a big deal; a queen coming back onto the board usually ends the game quickly because of the huge material imbalance that suddenly exists.

If the defender can't stop the pawn from promoting, he will often have to give up a piece for it. This also gives the player trying to promote the pawn a significant lead in material, but not as much of one had the new queen survived.

Passed pawns are the most dangerous pawns; a pawn has to become passed before it can promote.

An important concept to keep in mind is that positions with symmetrical pawn structures, where pawns on each file have a counterpart standing directly in their path, tend to be more drawish than those with asymmetrical structures.

Asymmetrical pawn structures give both players greater winning and losing chances because both players have greater odds of creating a passed pawn and then promoting it.

It is often better to have the further advanced pawn in the endgame than an extra pawn.

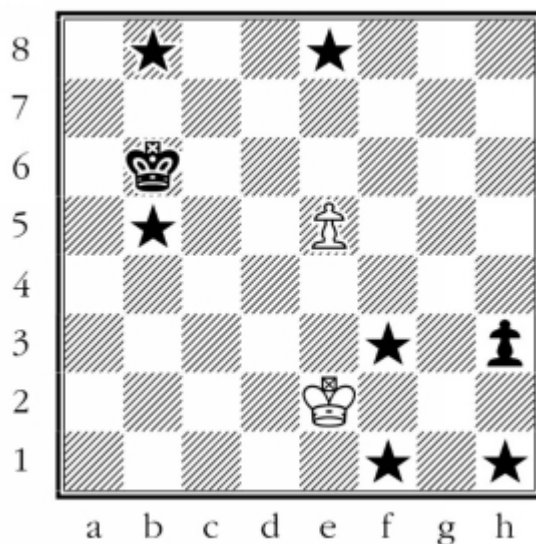
Square of the pawn

When a passed pawn can advance safely up the board and promote, that player usually wins the game.

Pawns and kings move at the same speed, one square at a time.

The square of the pawn is an imaginary square that the defending king must move into in order to win a one-on-one race with a passed pawn to the promotion square. The square is defined on the side of the pawn where the defending king is located.

When other pieces aren't able to help to stop a passed pawn and the king is outside the square of the pawn, the pawn likely promotes, winning the game.



The four corners of the square of the pawn are the square the pawn is currently resting on, the promotion square, the square on the diagonal drawn to the eighth rank from the pawn's current position (on the side of the pawn where the defending king is located), and the square on the board diagonally opposite the promotion square that completes the imaginary square.

The three other corners of the square of White's pawn, not including the e5 square that pawn is currently resting on, are marked with stars on e8, b8, and b5.

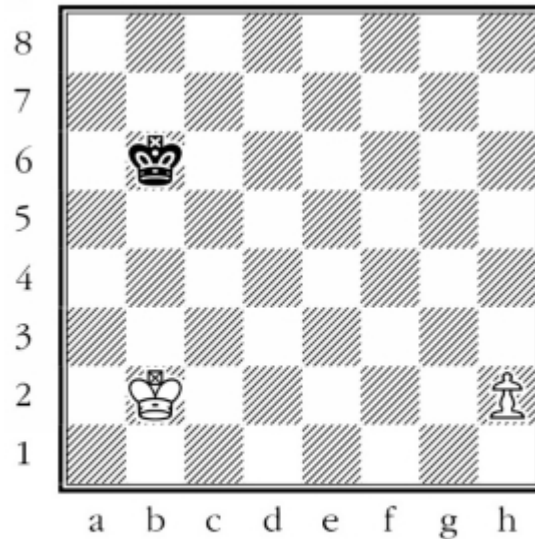
Since Black's king is in the square, the king can catch White's pawn regardless of whose turn it is.

Three corners of the square of Black's pawn, not including the h3 square that pawn is currently resting on, are marked with stars on h1, f1, and f3.

With White to move, the king can move into the square and catch the pawn.

With Black to move, the pawn can move to h2 and then safely promote the next move.

A pawn on its original square can move two squares on its first move and shrink the square of the pawn by an extra square, in effect “stealing” a move.



Position after 43...Kb6
White to move

The corners of the square of the h2 pawn are actually h3, h8, c8, and c3.

White wins with **44.h4** since Black's king is outside the square of the pawn.

The pawn promotes after **44...Kc6 45.h5 Kd6 46.h6 Ke6 47.h7 Kf7 48.h8=Q**.

With Black to move, the king can move into the square of the h2 pawn and catch the pawn before it promotes.

Zugzwang

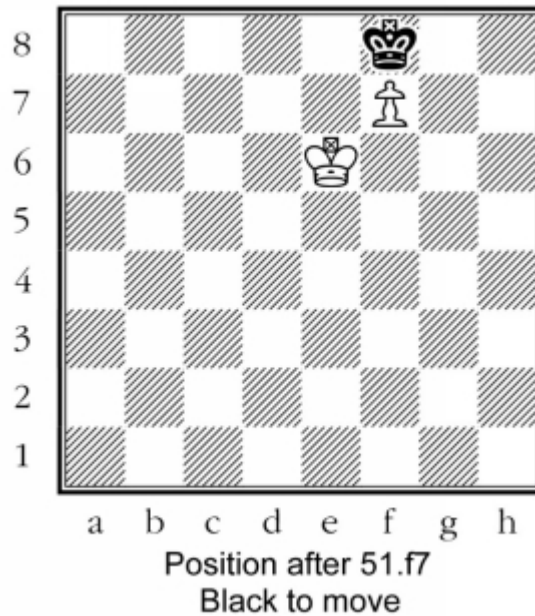
Every tempo in the endgame can be critical to the outcome of the game.

Each player generally wants it to be their turn to move. There are situations especially in the endgame, where there are fewer pieces and choices remaining, when you don't want it to be your move because being forced to move results in an undesirable outcome.

The word zugzwang [German] means "compelled to move."

Zugzwang is a situation where you would prefer to pass your move to your opponent because any move you make would make your position worse.

Zugzwang in king and pawn endings is a common theme that also occurs in positions with other pieces on the board.



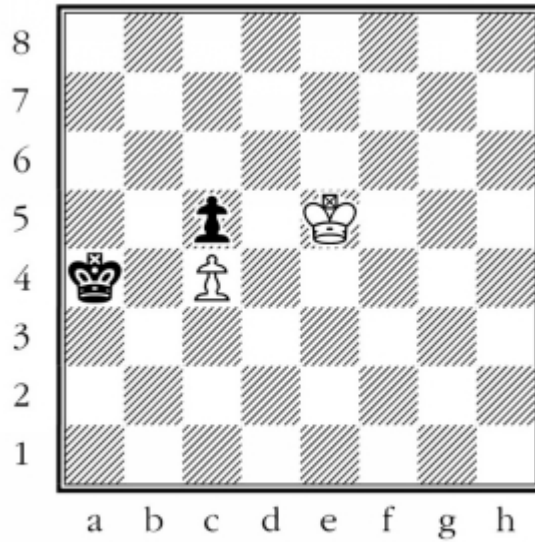
Black is trying to prevent the pawn from promoting.

Black is in zugzwang since the king is forced to move off the promotion square with **51...Kg7**.

This allows White to play **52.Ke7** and promote the pawn on the next move.

If instead it were White to move, White would be in zugzwang because moving the king to f6 in order to keep the pawn protected would be stalemate.

Sometimes you can lose a move or tempo to avoid zugzwang and put your opponent in zugzwang.



Position after 49.Ke5
Black to move

Black must carefully consider the options in this position.

The obvious 49...Kb4? loses because after 50.Kd5 Black is in zugzwang and must move the king, abandoning the c4 pawn.

The winning move for Black is to lose a move by playing **49...Kb3!**

White must respond **50.Kd5** to protect the c4 pawn.

Black can now play **50...Kb4**, putting White in zugzwang because the king must move away from protecting the pawn on c4.

Opposition

Opposition is when the two kings face each other on a file (or rank) with an odd number of squares between them.

The *direct opposition* is when the kings are separated by one square on a file or rank.

The player not on the move is said to “have the opposition”.

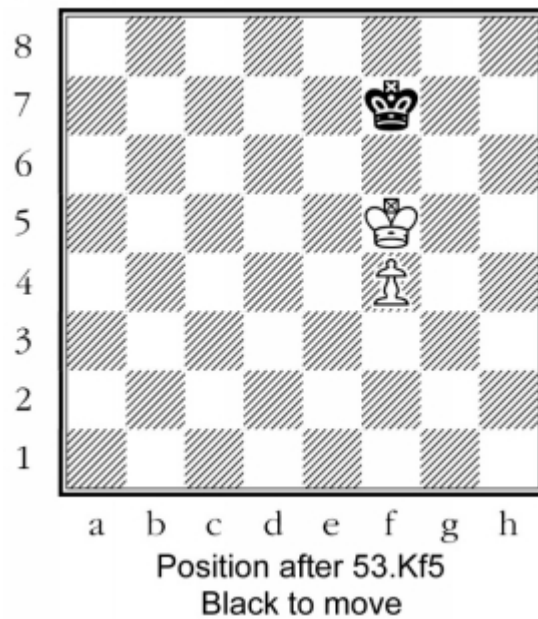
Having the opposition in many king and pawn endings can be the difference between a win and a draw or a draw and a loss.

In endings involving non-rook pawns and the kings close to the passed pawn, the player with the pawn wants the kings on files on opposite sides of the pawn so their king can escort the pawn up the board by protecting the squares in front of the pawn.

The defending king wants to block the pawn’s path in an attempt to prevent it from advancing and promoting.

To win the game, the player with the pawn must have the king in front of the pawn and have the opposition so that he can force the kings to files on opposite sides of the pawn.

If the strong side’s king is in front of the pawn and the weakside has the opposition, the weakside can draw with correct play.



The player to move is in zugzwang and has to move the king, giving the opponent’s king the opportunity to access important squares.

With Black to move, White has the opposition.

53...Ke7 54.Kg6 Note that White’s king moves to the file on the other side of the f-file than Black’s king.
After **54...Kf8 55.Kf6 Kg8 56.Ke7 Kg7 57.f5**, White can safely advance and promote the pawn.

If instead it were White to move, Black would have the opposition.

White cannot make progress after **54.Kg5 Kg7 55.Kf5 Kf7 56.Ke5 Ke7** since Black’s king keeps the opposition by shadowing White’s king.

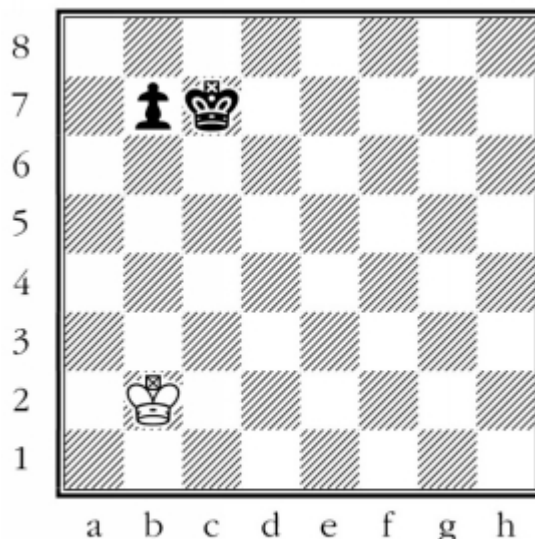
The only way White can attempt to make progress is **57.f5**.

57...Kf7 Black can’t allow White’s king to move back in front of the pawn.

58.f6 Kf8 Black’s king must retreat in front of the pawn.

59.Ke6 Ke8 Black takes the opposition and draws after **60.f7+ Kf8 61.Kf6 stalemate**.

Here is an example of winning a king and pawn endgame with the opposition when the pawn starts on the second rank. The method works for all non-rook pawns.



Position after 52.Kb2
Black to move

Black plays **52...Kb6** to move in front of the pawn and establish the opposition.

53.Kb3 Kb5 maintaining the opposition. White has to move the king to the a-file, c-file, or retreat.

54.Kc3 Note that if it were now Black to move, Black could waste a tempo by playing 54...b6 to gain the opposition.

Black plays **54...Ka4** attacking the b3, b4, and b5 squares.

55.Kb2 If White plays 55.Kc4, Black advances the pawn with 55...b5+.

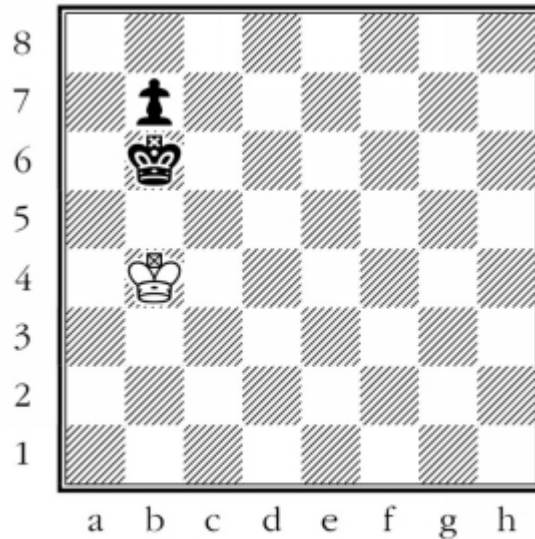
Black regains the opposition with **55...Kb4**. Black needs to be careful and not advance the pawn too quickly with 55...b5? because White can play 56.Ka2 and gain the opposition.

This time White picks the file on the other side of the b-file for the king and plays **56.Ka2**.

Black moves in the opposite direction to the c-file with **56...Kc3**.

57.Ka3 b5 58.Ka2 b4 59.Kb1 Kb3 regaining the opposition. 59...b3? is a mistake because White takes the opposition with 60.Kc1 and the game is drawn after 60...b2+ 61.Kb1 Kb3 stalemate.

60.Ka1 Kc2 61.Ka2 b3+ and the pawn can promote in two moves.



Position after 54.Kb4
Black to move

Black's king is in front of the pawn, but White has the opposition and can draw with proper play.

54...Kc6 55.Kc4 Kb6 56.Kb4 Ka6 57.Ka4 White keeps the opposition and is happy with a threefold repetition draw.

57...b5+ The only way to try make progress. White can't allow Black's king back in front of the pawn.

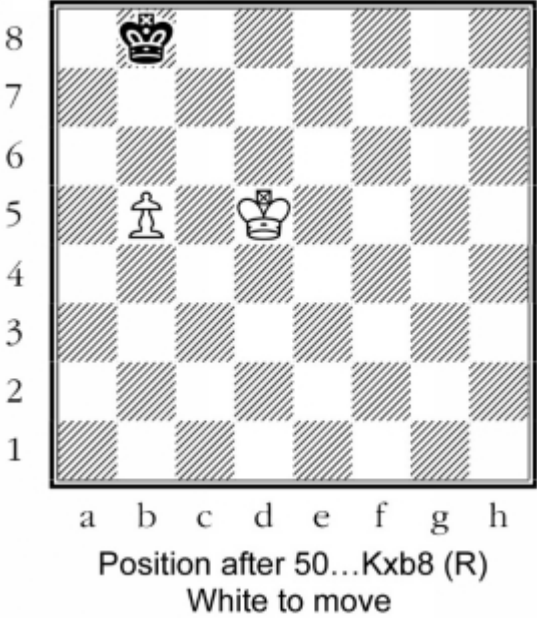
58.Kb4 Kb6 59.Kb3 It is good form to retreat in front of the pawn, so White can regain the opposition when Black's king moves forward diagonally. This will become critical when the pawn reaches the 6th rank.

59...Kc5 60.Kc3 b4+ 61.Kb3 Kb5 62.Kb2 Ka4 63.Ka2 b3+ 64.Kb2 Kb4 Black has made progress advancing the pawn, but this is where the progress stops.

65.Kb1! With the pawn on the 6th rank, it is critical to retreat in front of the pawn. Black gains the opposition and puts White in zugzwang with a winning position after 65.Kc1? Kc3 or 65.Ka1? Ka3.

65...Kc3 66.Kc1 Kb4 67.Kb2 Ka4 68.Kb1 Ka3 69.Ka1 White has the opposition. **69...b2+ 70.Kb1 Kb3** stalemate. Black can't make progress moving the king around the pawn and White can soon claim a threefold repetition draw.

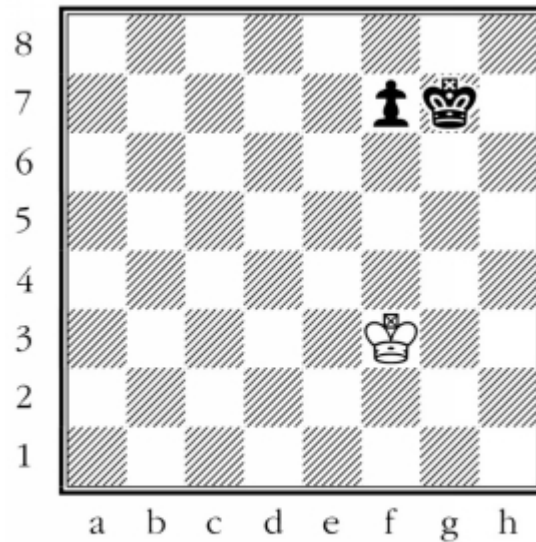
When the strong side's king reaches the 6th rank with the pawn on the 5th rank or closer to its starting square, the pawn can promote, regardless of who has the opposition.



51.Kc6 Ka7 51...Kc8 taking the opposition doesn't work because of **52.b6 Kb8 53.b7 Ka7 54.Kc7** and the pawn can promote.
52.Kc7 52.b6+? draws after **52...Ka8 53.Kc7** stalemate or **53.b7+ Kb8 54.Kb6** stalemate.
52...Ka8 53.Kb6 Kb8 54.Ka6 Ka8 55.b6 Kb8 56.b7 Kc7 57.Ka7 and the pawn can promote.

Distant opposition and diagonal opposition

An extension of the direct opposition is the *distant opposition* where there are three or more odd numbered squares between the kings. When the kings are one square apart diagonally, it is called the *diagonal opposition*.



Position after 45...Kg7
White to move

White plays **46.Kg3!** gaining the distant opposition with three squares between the kings.

Losing for White are both 46.Kf4 Kf6 and 46.Kg4 Kg6 giving Black the opposition.

Advancing the king with 46.Ke4 loses to 46...Kg6 gaining the diagonal opposition. Black wins after 47.Ke5 Kg5 or 47.Kf4 Kf6 gaining the opposition.

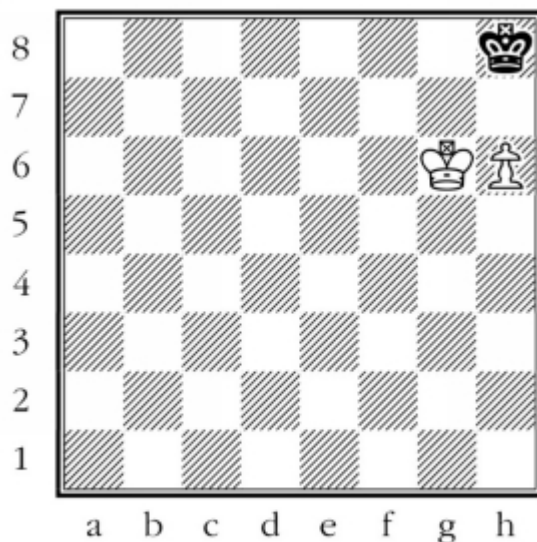
After 46.Kg3, White gains the opposition and draws after 46...Kf6 47.Kf4, 46...Kg6 47.Kg4, or 46...Kh6 47.Kf4 Kg6 48.Kg4.

Rook pawns

Rook pawns (pawns on the a- or h- files) are unique since they are on the edge of the board. Rook pawns give the defender greater drawing chances because of stalemate possibilities on the promotion square.

With king and rook pawn vs. king, all the defender's king needs to do is move in front of the pawn to draw. The opposition doesn't apply to rook pawns.

Other possible draws with rook pawns occur when the strong side's king is trapped in front of the pawn by the opposing king or when the weak side's king can reach the promotion square when the strong side with the rook pawn has a bishop on the color opposite that of the promotion square (the "wrong-colored bishop").



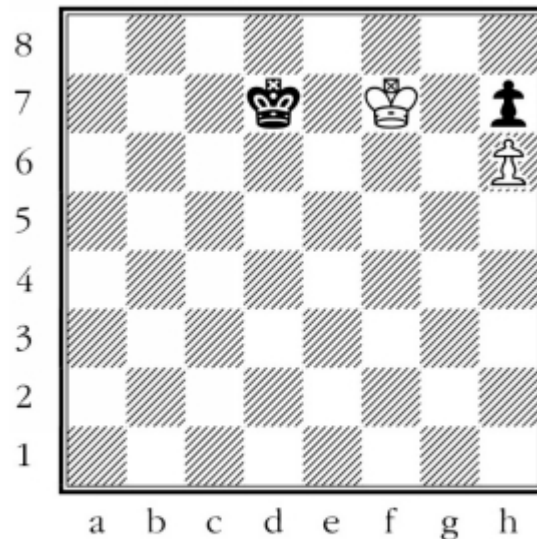
Position after 62...Kh8
White to move

The opposition doesn't work with rook pawns since all the weak side's king needs to do is reach the promotion square in order to draw.

63.h7 stalemate. Black's king has no legal moves.

If it were Black to move, stalemate also occurs after 63...Kg8 64.h7+ Kh8 65.Kh6.

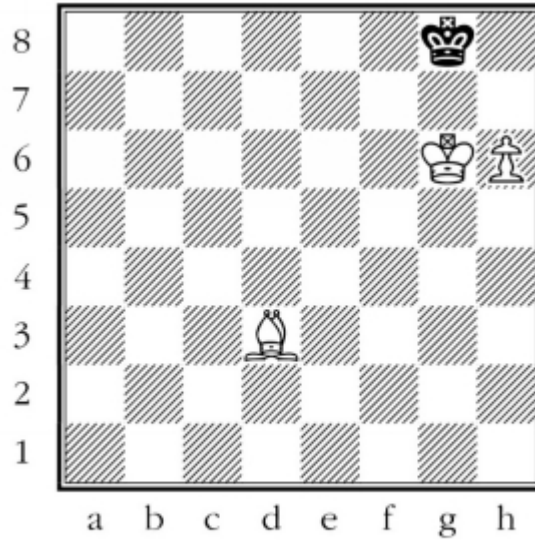
Another drawing position with rook pawns occurs when the strong side's king is trapped in front of the pawn that is trying to promote.



Position after 51...Kd7
White to move

**52.Kg7 Ke7 53.Kxh7 Kf7 54.Kh8 Kg6 54...Kf8 55.Kh7 Kf7 leads to a draw by repetition.
55.h7 Kf7 stalemate.**

If instead the pawns were located on the g-file, White's king could move out of the way of the pawn to the h-file and then promote the pawn after he captures Black's pawn.



Position after 47...Kg8
White to move

White is ahead a bishop and pawn in material.

This position is drawn because White has a light-squared bishop and the h8 promotion square is a dark square. Black's king can move back and forth between h8 and g8. White cannot make progress due to potential stalemates.

If the pawn advances to h7, White's king will have to back away and allow Black's king to move back and forth between g7 and h8 to avoid stalemate.

If White's bishop were a dark-squared bishop, it could protect h8 and safely promote the pawn.

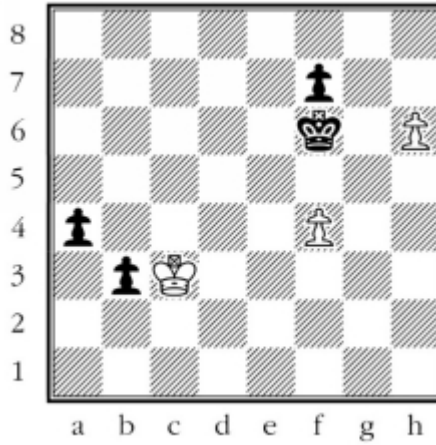
Likewise, if White had a pawn on the a-file, White would need to have a bishop on the light squares in order to protect a8 to safely promote the pawn.

For non-rook pawns, the player with the bishop and pawn wins regardless of the color of the promotion square. Note that if White had a knight instead of a bishop, it would be a winning position for White since the knight can eventually get to f7 to protect the h8 promotion square.

Basset Hound Problems



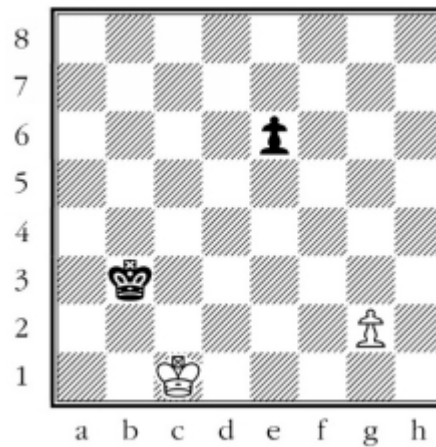
1-1



Position after 46...a4
How does White win the game?



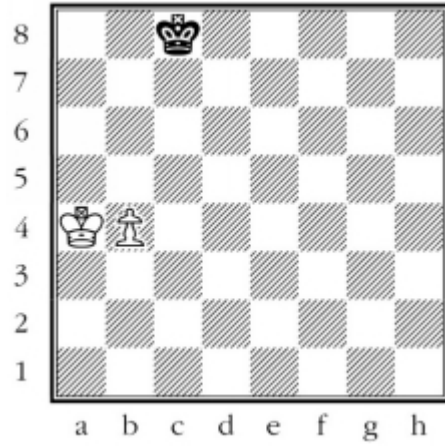
1-2



Position after 50...Kb3
What is White's best move?



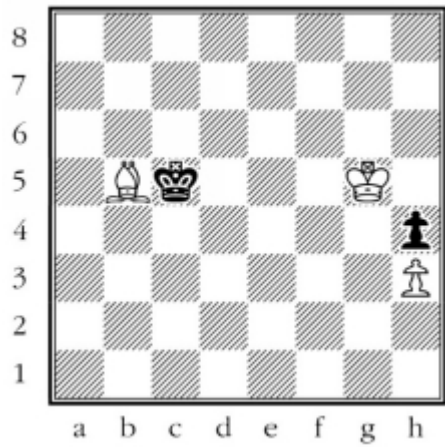
1-3



Position after 53.Ka4
What is Black's best move?



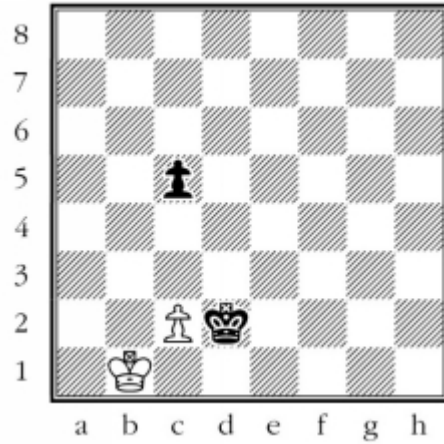
1-4



Position after 48.Kg5
What is Black's best move?



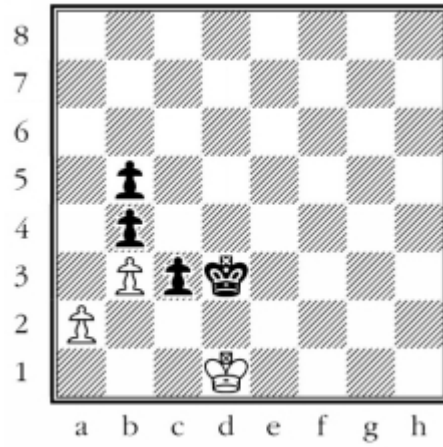
1-5



Position after 55...Kd2
 What is White's best move?



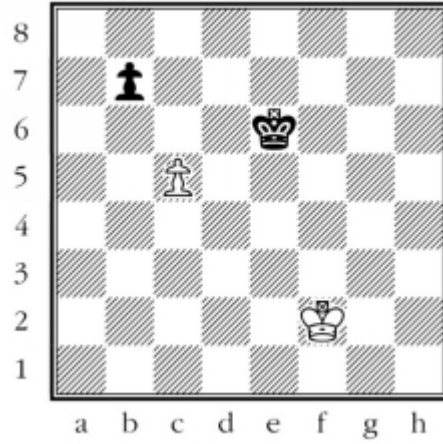
1-6



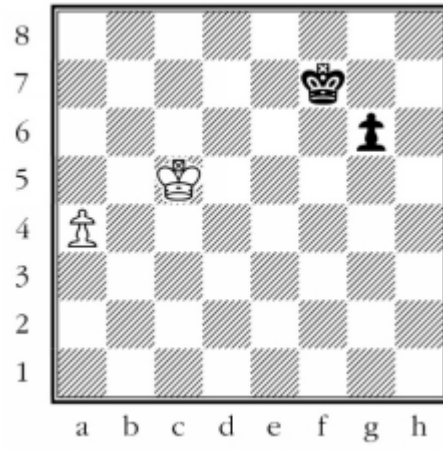
Position after 58.Kd1
 How does Black win the game?



1-7

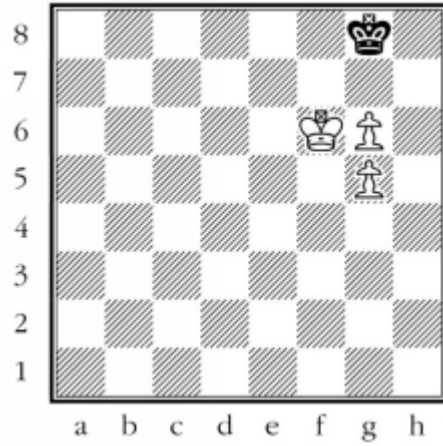


Position after 55...Ke6
 What is White's best move?



Position after 43.a4
 What is Black's best move?

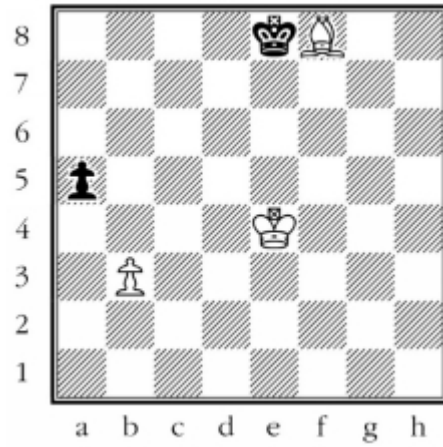




Position after 46...Kg8
How does White win the game?



1-10

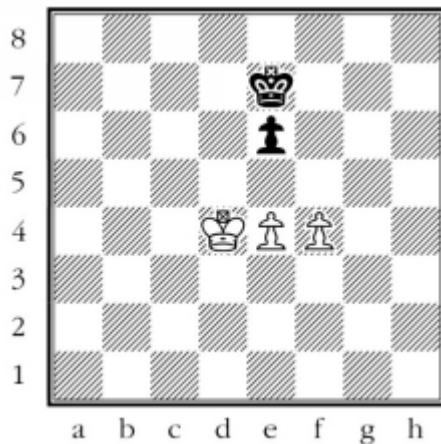


Position after 48.Bxf8 (R)
What is Black's best move?

Chess Detective Problems



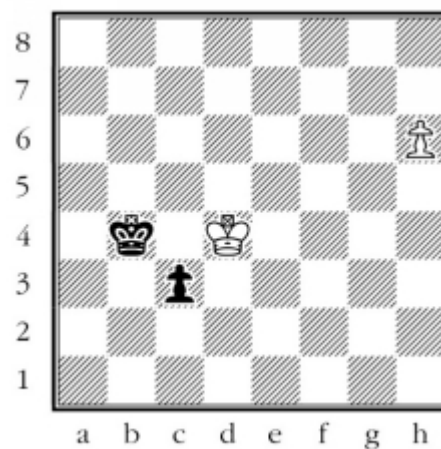
1-11



Position after 52...Ke7
What is White's best move?



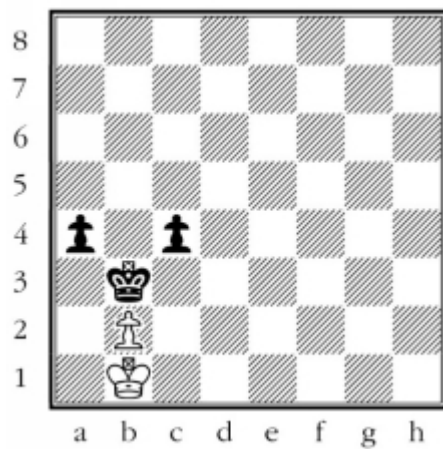
1-12



Position after 54...c3
How does White win the game?



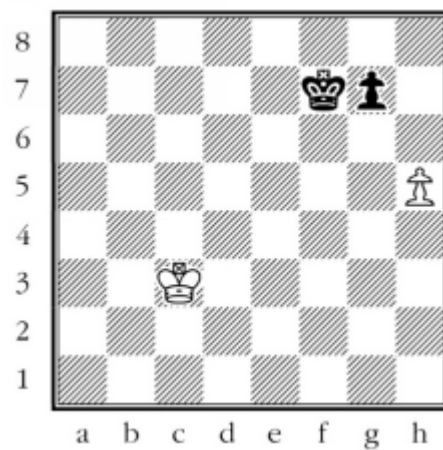
1-13



Position after 54...Kb3
What is White's best move?



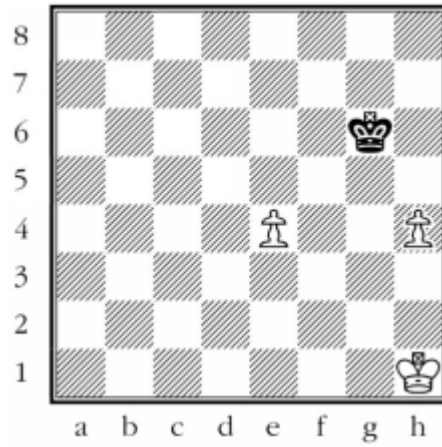
1-14



Position after 49.Kc3
What is Black's best move?



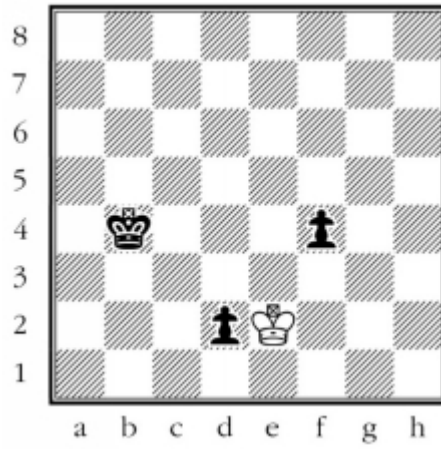
1-15



Position after 44.gxh4 (R)
What is Black's best move?



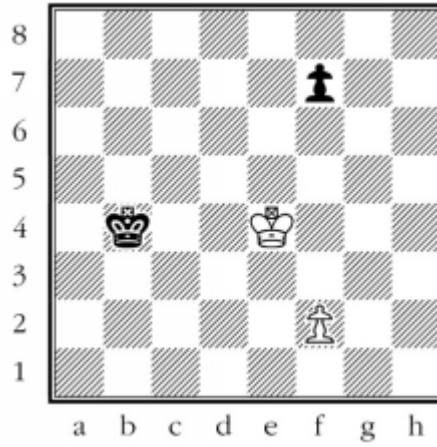
1-16



Position after 52.Ke2
How does Black win the game?



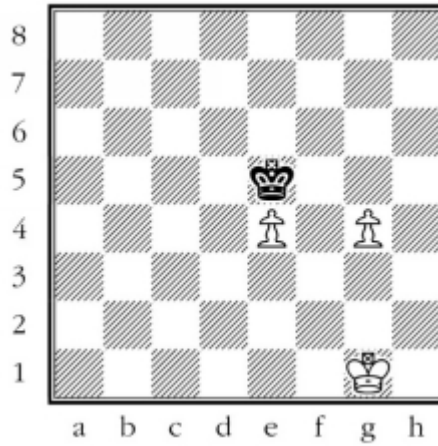
1-17



Position after 60...Kxb4 (p)
 What is White's best move?



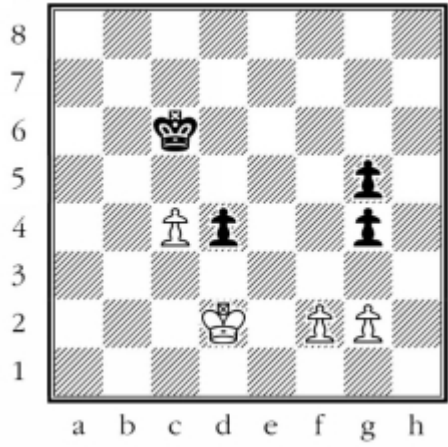
1-18



Position after 50...Ke5
 How does White win the game?



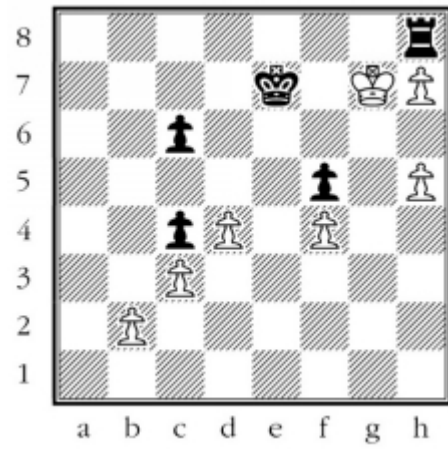
1-19



Position after 41.Kd2
What is Black's best move?



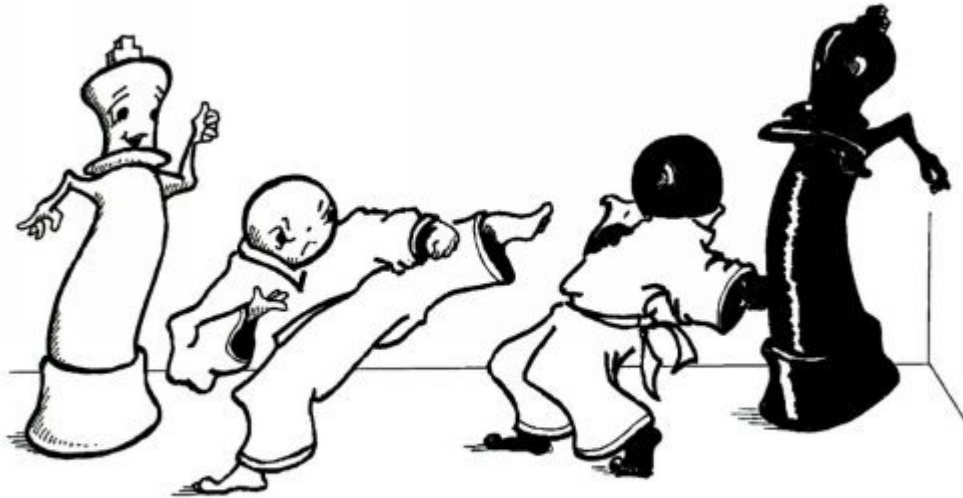
1-20



Position after 54.Kg7
How does Black win the game?

LESSON 2

ADVANCED KING AND PAWN ENDINGS



*“Pawns are the soul of the game. They alone create attack and defense;
the way they are deployed decides the fate of the game.”*

André Philidor



The king can help friendly pawns advance and is an effective blockader of the opponent's passed pawns.

Protected passed pawns are superior to isolated passed pawns.

The player who is ahead in material generally want to trade pieces, not pawns, making the position easier to win. The player who is behind generally wants to trade pawns, not pieces, with the goal of eliminating the opponent's pawns, which are future potential queens.

The strong side with a material advantage generally wants to avoid trading pawns. In other words, a king and two pawns vs. king and one pawn tends to increase winning chances over a king and one pawn vs. king. An extra pawn is often used as a decoy to divert the attention of the defending king.

In Lesson 2, we will expand upon the king and pawn endgame concepts discussed in Lesson 1.

A pawn that is closer to the edge of the board and thus further away from the other pawns is called an *outside passed pawn*. The outside passed pawn concept is an extension of the square of the pawn.

The strength of an outside passed pawn is that it lures the opponent's king further away from the other pawns as he attempts to capture it. It takes extra time for the defending king to travel a longer distance to capture the outside passed pawn and then to return to the side of the board with the remaining pawns.

Outflanking occurs when the king moves toward and around a pawn mass he is attacking. The goal of outflanking is to win the opponent's pawns by eventually forcing the defending king into zugzwang where he must abandon the protection of a vulnerable pawn.

Triangulation is a king maneuver used to waste or lose a move, with the goal of forcing the opponent into zugzwang.

Counting out races between kings and pawns is critical to mastering endgame play.

In the endgame you often need to calculate more moves ahead than in the middlegame or opening. This is easier since there are fewer possible responses from your opponent.

A common theme in many endgames is a pawn race to the promotion square. Be on the lookout for when pawns promote with check, which often gains a critical tempo.

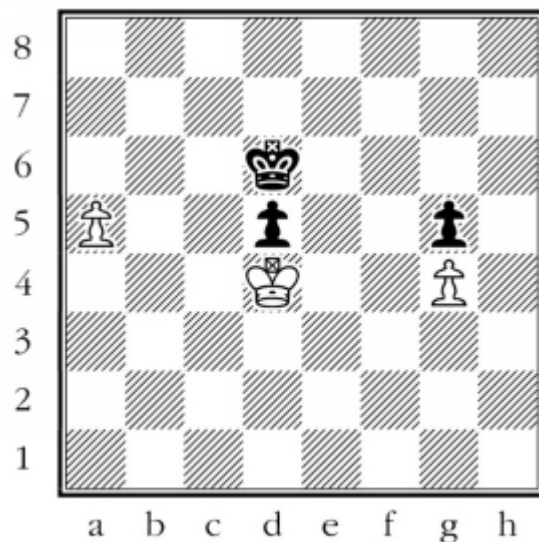
Outside passed pawn

The outside passed pawn is the passed pawn furthest from the other pawns where the main battle will eventually take place.

The defending king has to stay in the square of the outside passed pawn and will eventually have to capture the pawn so it doesn't promote.

The further the outside passed pawn is from the other pawns, the longer it takes the defender's king to catch it and return.

Outside passed pawns are often used as decoys.



Position after 48...Kd6
White to move

Each player has an isolated passed pawn.

Both kings have to stay in the square of the opponent's passed pawn to prevent it from promoting.

White has an outside passed a-pawn.

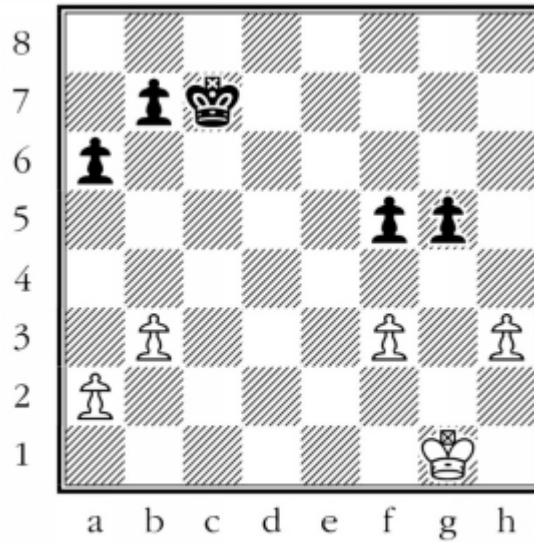
49.a6 Kc6 50.a7 White uses the a-pawn as a decoy to draw Black's king away from the other pawns.

50...Kb7 Black's king must chase the a-pawn.

51.Kxd5 White loses a tempo by promoting the pawn since Black's king has to move to the a-file to capture the pawn regardless of what square it is on. A tempo loss isn't important in this position, but in many positions it can be critical.

51...Kxa7 White will win because the king is closer to the remaining pawns on the kingside.

52.Ke5 Kb7 53.Kf5 Kc7 54.Kxg5 Kd7 55.Kf6 Ke8 56.Kg7 Ke7 57.g5 With the king's protection, White can easily promote the pawn and win the game.



Position after 38...Kc7
White to move

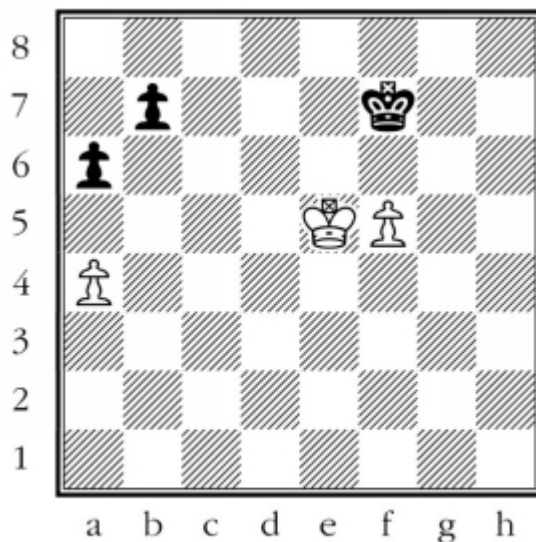
White creates an outside passed pawn by playing **39.f4**. 39.Kg2 Kd6 40.f4 gxf4 41.Kf3 Ke5 transposes to the main line below.

39...gxf4 39...g4 40.hxg4 hxg4 41.Kg2 Kd6 42.Kg3 Ke6 43.Kxg4 is winning for White.

40.Kf2 Kd6 41.Kf3 Ke5 42.h4 Kf6 Black's king must pay attention to the outside passed h-pawn.

43.Kxf4 Kg6 44.h5+ Kxh5 45.Kxf5 White is winning since the king is now closer to the queenside pawns.

White will first capture Black's pawns and then promote his pawns.



Position after 38...Kf7
White to move

White's f5 pawn is an outside passed pawn.

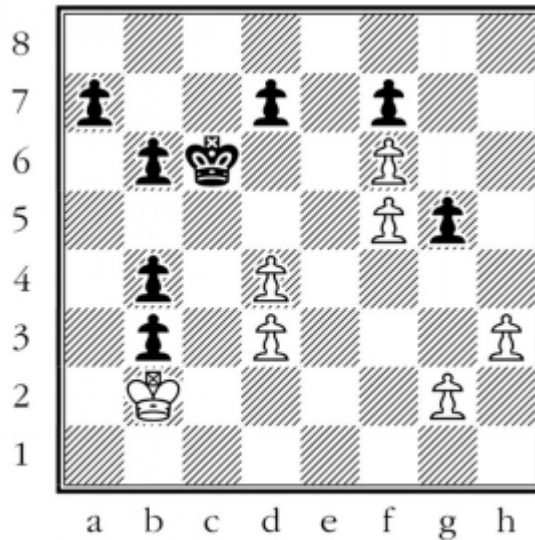
White fixes Black's queenside pawns to prevent 39...b5 by playing **39.a5!**

39...Ke7 40.f6+ Kf7 41.Kf5! Black can draw if White's king heads to the queenside in an attempt to promote the a-pawn after 41..Kd6? Kxf6 42.Kc7 Ke6 43.Kxb7 Kd6 44.Kxa6 Kc7 since White's remaining pawn is a rook pawn.

41...Kf8 42.Ke6 Ke8 43.f7+ White also wins by moving the king to the queenside with 43.Kd6 Kf7 44.Kc7 Kxf6 45.Kxb7 Ke7 46.Kxa6 Kd7 47.Kb7 blocking Black's king so the a-pawn can safely promote.

43...Kf8 44.Kf6 Black is in zugzwang and has to move the b-pawn.

44...b5 45.axb6 a5 46.b7 a4 47.b8=Q mate.



Position after 40...Kc6
White to move

Black has a clear advantage on the queenside with four passed pawns.

White prepares to create an outside passed pawn on the kingside with **41.g3!**

41...Kd5 Black's king needs to stay in the square of White's soon-to-be passed h-pawn.

42.h4 gxh4 43.gxh4 Kxd4 44.h5 Ke5 45.h6 Kxf6 Black's king is in the square of White's h-pawn, but can't move without leaving the square.

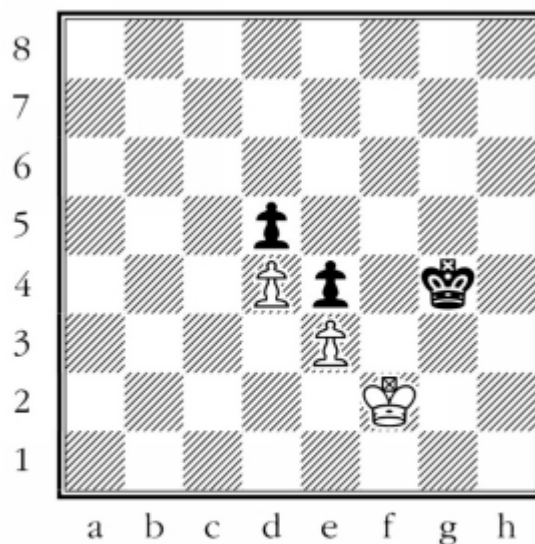
46.Kxb3 a5 The battle is now between White's king and Black's queenside passed pawns.

47.Ka4 d6 48.d4 b5+ 49.Kb3 d5 50.Kb2 a4 51.Kc2 b3+ 52.Kc3 b4+ 53.Kb2 Black is in zugzwang and either has to advance and lose the queenside pawns or move the king, which allows White's h-pawn to promote.

Outflanking

Outflanking is a king maneuver where the player with the more aggressively placed king moves toward and around the pawn mass he is attacking, separating the kings by a file.

The outflanked king is eventually put in zugzwang, resulting in the loss of the base pawn.



Position after 42.Kf2

Black to move

Black's goal is to capture White's base pawn on e3. Conversely, White would like to capture Black's d5 pawn.

Black has the advantage since his king is closer to e3.

Black wins by outflanking White's king with **42...Kh3**. If it were White to move, he could play **43.Kg2** to prevent Black's king from outflanking him.

43.Kf1 Kg3 44.Ke2 trying to keep Black's king from moving to f3.

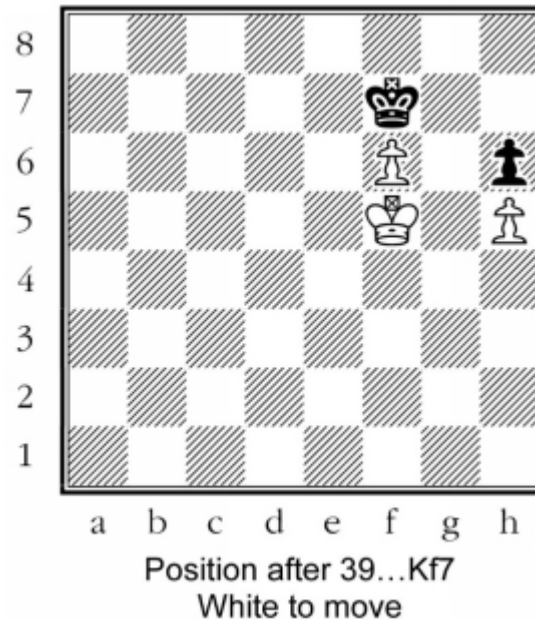
44...Kg2 45.Ke1 Kf3 46.Kd2 Kf2 White is in zugzwang and must relinquish pawns after **47.Kd1 Kxe3**.

Triangulation

Triangulation is a king maneuver where a player purposely loses a move or a tempo in order to force the opponent into zugzwang.

The time to be on the lookout for triangulation is when a position occurs where the opponent would be in zugzwang if it were their move.

Triangulation usually occurs in king and pawn endgames when the attacking king can maneuver on three adjacent squares in the shape of a triangle to reach the starting position while the defending king has only two squares available to maneuver between.



Note that if the h-pawns were not on the board, Black could draw by retreating the king to f8 and gaining the opposition when White's king advances to e6 or g6.

Remember if you are behind in material, you generally want to trade pawns, not pieces, with the goal of eliminating all your opponent's potential queens.

If it were Black to move, Black would be in zugzwang and have to retreat the king to f8. White could then advance the king to g6, win the h-pawn, and then promote one of the remaining pawns.

White must play **40.Ke5** to keep the f6 pawn protected.

Black's king must retreat in front of the pawn with **40...Kf8** so he can take the opposition if White plays **41.Ke6**.

As long as White's king is next to f5, Black cannot move the king to f7 since White can move the king back to f5 to obtain the starting position in the diagram above with Black to move.

White can triangulate by moving the king to e4-f4-e5 or f4-e4-e5 while Black's king is restricted to move back and forth between e8 and f8.

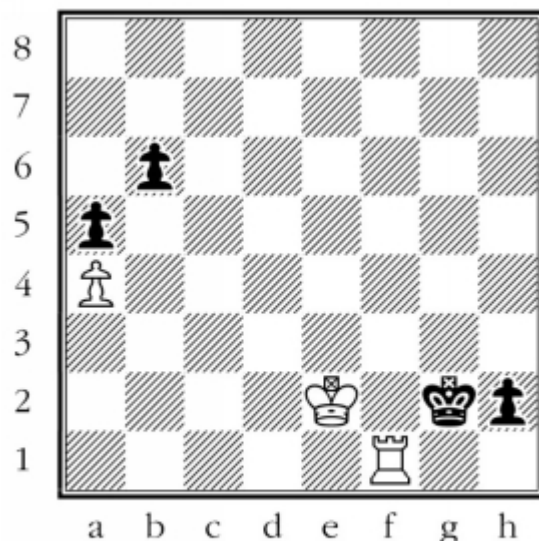
41.Ke4 Ke8 42.Kf4 Kf8 43.Ke5 Black is in zugzwang. **43...Ke8 44.Ke6** gives White the opposition and the f-pawn promotes after **44...Kf8 45.f7 Kg7 46.Ke7**. If instead Black plays **43...Kf7**, then **44.Kf5 Kf8 45.Kg6** wins Black's h6 pawn.

Counting races

Accurately counting the race to promote pawns is critical in the endgame.

Carefully examine all the possible pawn moves for both players on each move.

Be on the lookout for ways to gain a tempo at the end of a pawn race, like when a pawn promotes with check. Also check to see if pieces are positioned for tactics such as pins, forks, or skewers after a promotion occurs.



Position after 35...h2
White to move

White will be forced to sacrifice the rook if Black promotes the h-pawn.

The kings would then race toward the queenside pawns.

Black's king arrives just in time to prevent White's pawn from promoting by either reaching a8 or trapping White's king in front of the pawn after 36.Rb1 h1=Q 37.Rxh1 Kxh1 38.Kd3 Kg2 39.Kc4 Kf3 40.Kb5 Ke4 41.Kxb6 Kd5 42.Kxa5 Kc6.

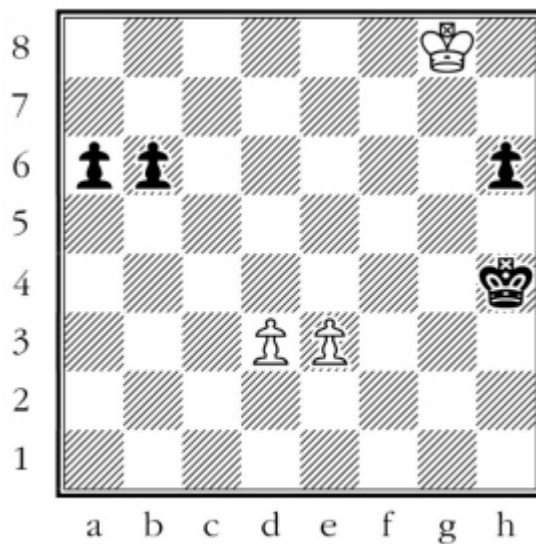
White wins the game by playing **36.Rh1!**

36...Kxh1 37.Kf2 trapping Black's king in front of the rook pawn.

Black is forced to play **37...b5** and after **38.axb5** it is a race to promote the pawns.

White is the first to promote after **38...a4 39.b6 a3 40.b7 a2 41.b8=Q a1=Q.**

Promoting first here is a big advantage since White can play **42.Qb7 mate.**



Position after 42...Kxh4 (R)
White to move

Both players have connected passed pawns. Black has an extra pawn on h6. It is a race to promote first. Connected passed pawns are safe from the enemy king since he would have to leave the square of the more advanced pawn to capture the base pawn.

43.d4! Black promotes with check after 43.e4? Kg5 44.Kf7 Kf4 45.Kf6 a5 46.e5 a4 47.e6 a3 48.e7 a2 49.e8=Q a1=Q+ giving Black winning chances with the extra pawn.

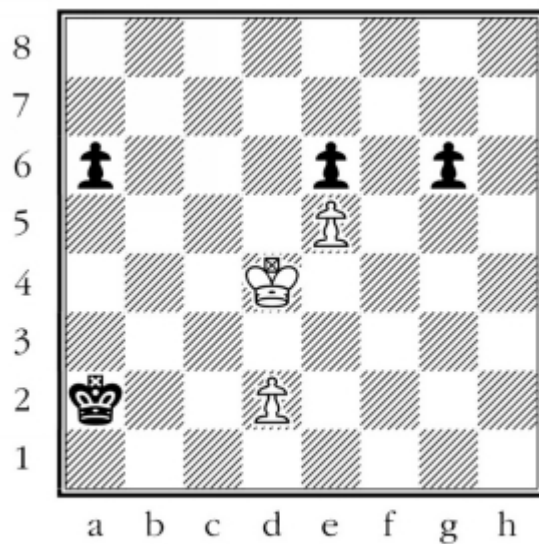
43...Kg5 44.Kf7 Kf5 45.d5 Ke5 46.e4 Black can't capture the e4 pawn without leaving the square of the d5 pawn.

46...a5 Black loses the game no matter which pawn is advanced.

46...b5 47.Ke7 b4 48.d6 b3 49.d7 b2 50.d8=Q b1=Q 51.Qd6+ Kxe4 52.Qg6+ skewering Black's king and queen on the b1-h7 diagonal.

Black also loses by promoting the h-pawn after 46...h5 47.Ke7 h4 48.d6 h3 49.d7 h2 50.d8=Q h1=Q 51.Qd6+ Kxe4 52.Qc6+ skewering the king and queen on the h1-a8 diagonal.

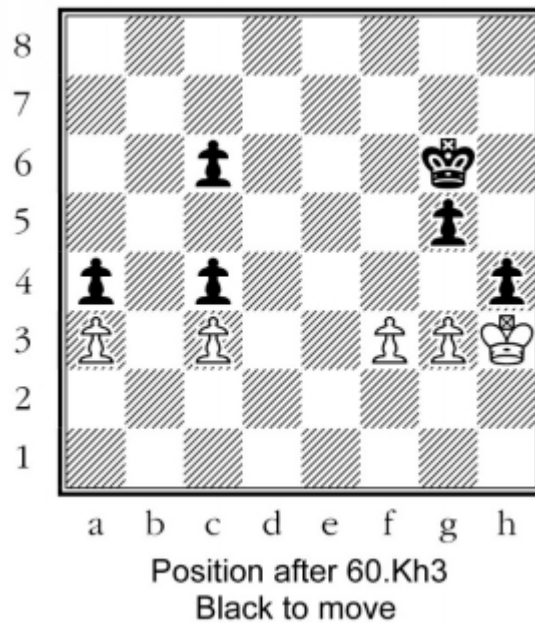
47.Ke7 a4 48.d6 a3 49.d7 a2 50.d8=Q a1=Q 51.Qh8+ skewers the king and queen on the a1-h8 diagonal.



Position after 48...Kxa2 (R)
White to move

White gains an important tempo by preventing Black's king from moving to b3 by playing **49.Kc3!**
 49.Ke4? Kb3 50.d4 Kc4 51.d5 exd5+ 52.Kf4 Kc5 53.Kg5 d4 54.e6 d3 55.e7 d2 56.e8=Q d1=Q gives Black the only winning chances.
 49.Kc5? g5 50.d4 g4 51.d5 g3 52.dxe6 g2 53.e7 g1=Q+ promoting with check and giving Black a winning position.
49...g5 50.d4 g4 51.Kd2! 51.d5 g3 52.dxe6 g2 53.e7 g1=Q 54.e8=Q with an equal position.
51...g3 52.Ke1! White gains a critical tempo by avoiding check when Black pushes the pawn to d3 in the variation 52.Ke2? Kb3 53.d5 exd5 54.e6 d4 55.e7 d3+.
52...Kb3 53.d5 exd5 54.e6 d4 55.e7 d3 56.e8=Q promoting first with a winning position.

Having a spare pawn move can be critical in the endgame.



Black has an important tempo to lose by having the option to play ...c5 at the right moment.

60...hxg3 61.Kxg3 Kf5 62.Kf2 White's king has to retreat.

62...Kf4 63.Ke2 63.Kg2 Ke3 64.Kg3 Kd3 65.Kg4 Kxc3 66.Kxg5 Kb3 67.f4 c3 and Black will promote first.

63...Kg3 64.Ke3 c5! Black uses the spare pawn move. **64...Kg2 65.f4** and White can draw the game.

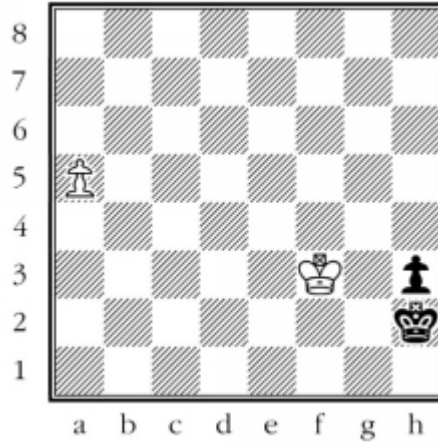
65.Ke2 65.Ke4 Kf2 66.f4 gxf4 67.Kxf4 Ke2 68.Ke4 Kd2 is winning for Black.

65...Kg2 66.Ke3 Kf1 67.Ke4 Ke2 68.Kf5 Kxf3 69.Kxg5 Ke3 Black's king will reach the queenside pawns first.

Basset Hound Problems



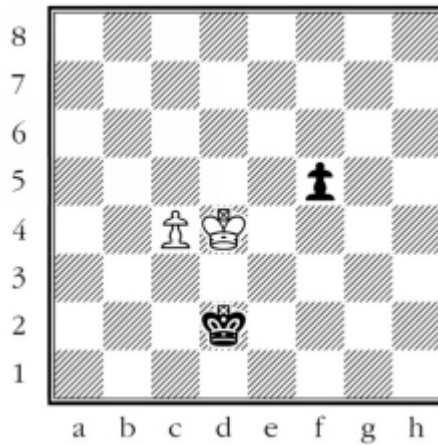
2-1



Position after 47...h3
How does White win the game?



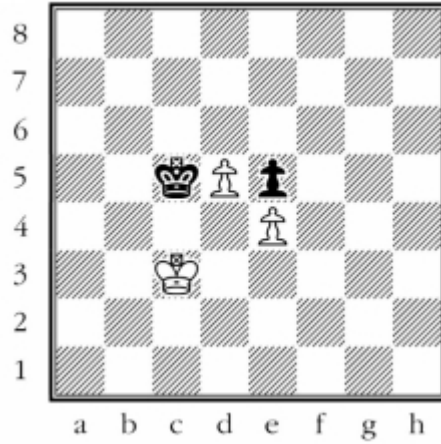
2-2



Position after 38.c4
What is Black's best move?



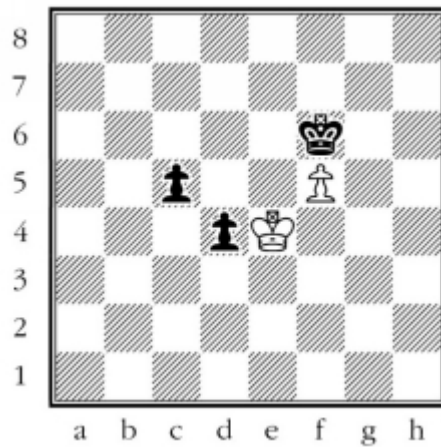
2-3



Position after 44...Kc5
How does White win the game?



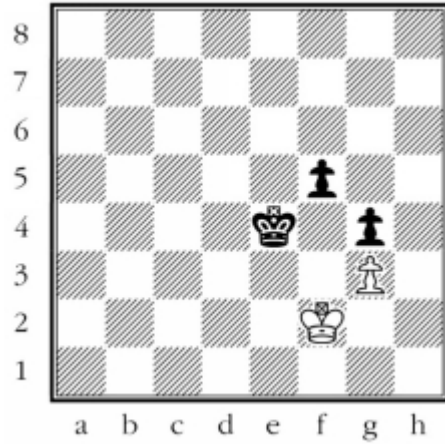
2-4



Position after 39...Ke4
How does Black win the game?



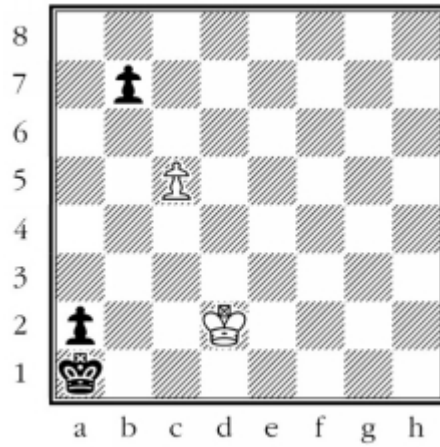
2-5



Position after 44.Kf2
 How does Black win the game?



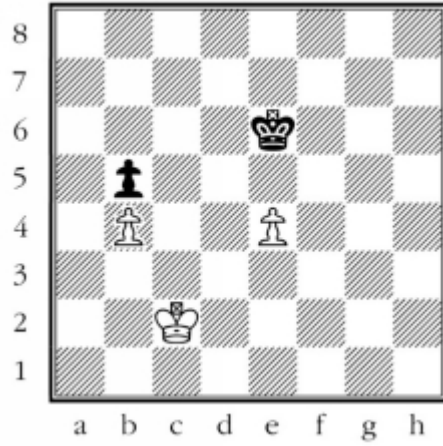
2-6



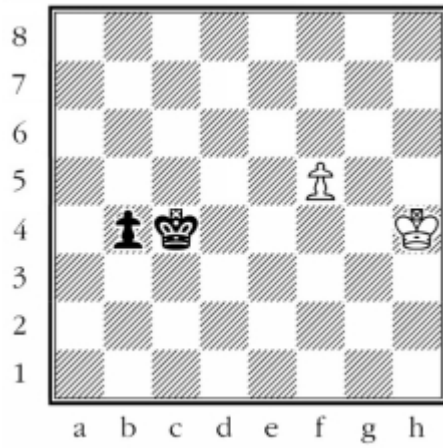
Position after 36...Kxa1 (B)
 How does White win the game?



2-7

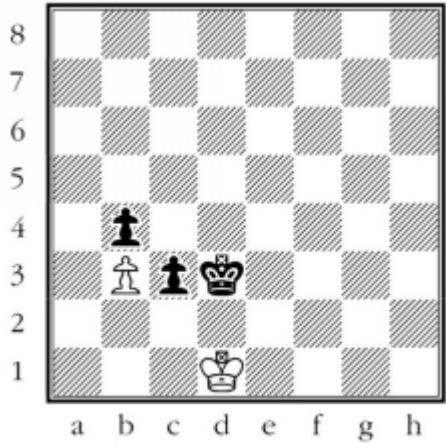


Position after 50...Ke6
How does White win the game?

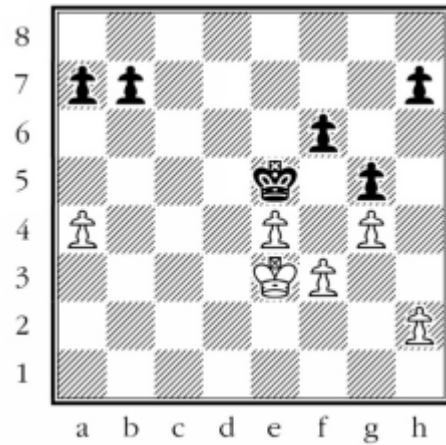


Position after 45.f5
What is Black's best move?





Position after 52.Kd1
 What is Black's best move?



Position after 50.Ke3
 What is Black's best move?

Chess Detective Problems



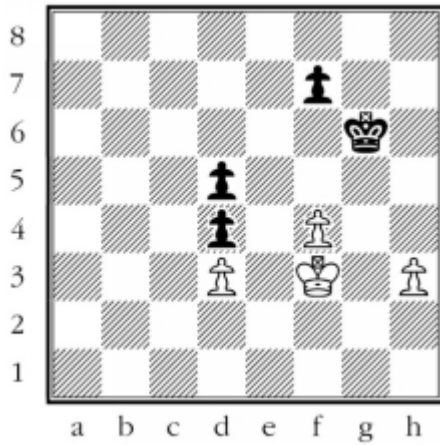
2-11



Position after 41...Ke7
What is White's best move?



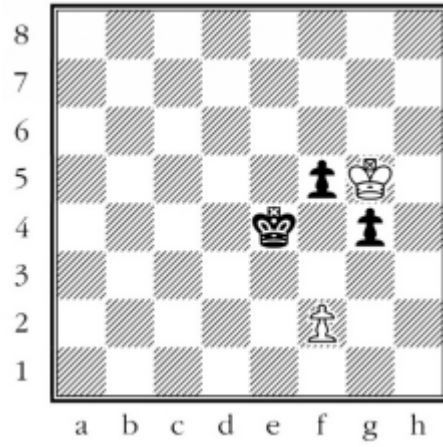
2-12



Position after 51...Kg6
What is White's best move?



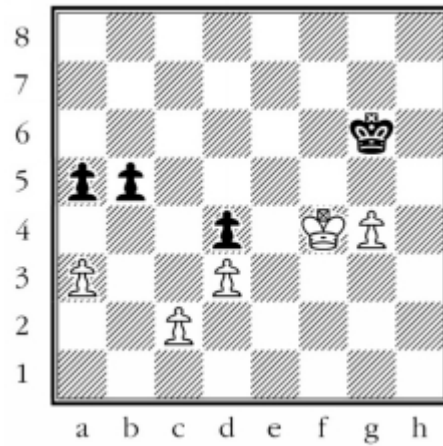
2-13



Position after 47.Kg5
How does Black win the game?



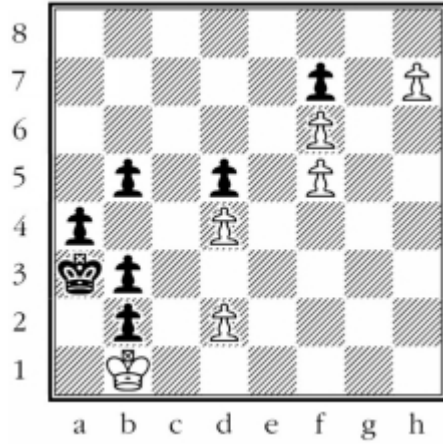
2-14



Position after 41.Kf4
How does Black win the game?



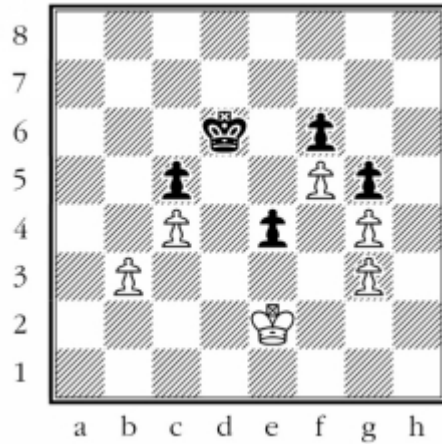
2-15



Position after 47...b3
 How does White win the game?



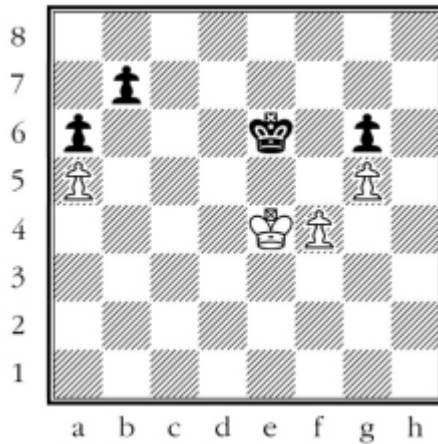
2-16



Position after 47...Kd6
 What is White's best move?



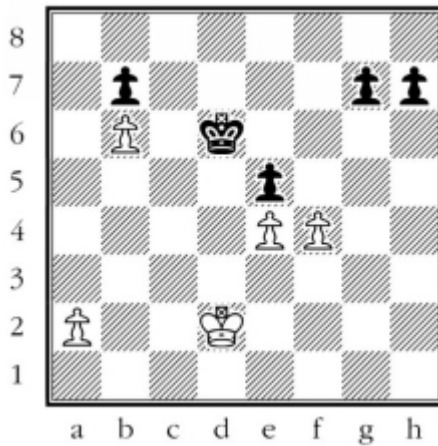
2-17



Position after 52...Ke6
 What is White's best move?



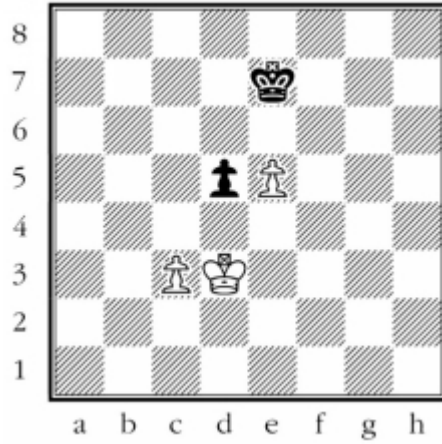
2-18



Position after 50.f4
 What is Black's best move?



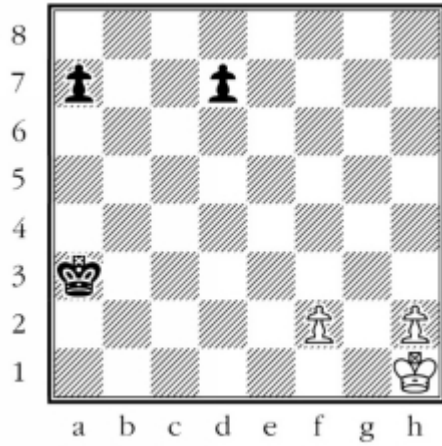
2-19



Position after 55...Ke7
What is White's best move?

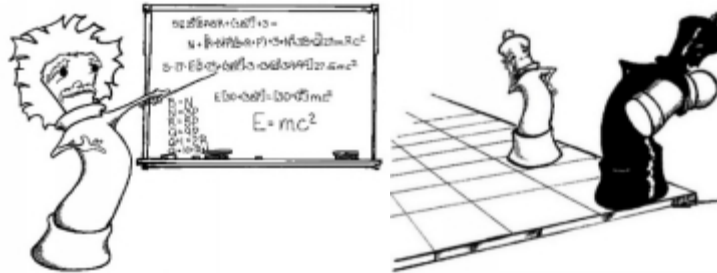
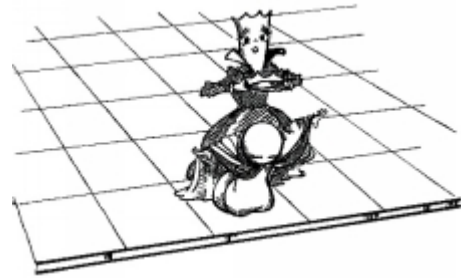
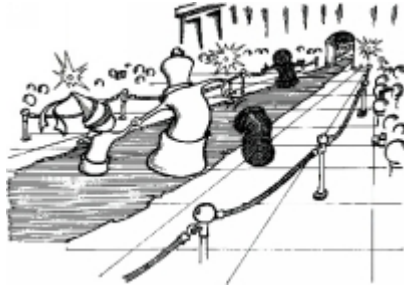


2-20



Position after 48...Kxa3 (R)
What is White's best move?

COMMON THEMES

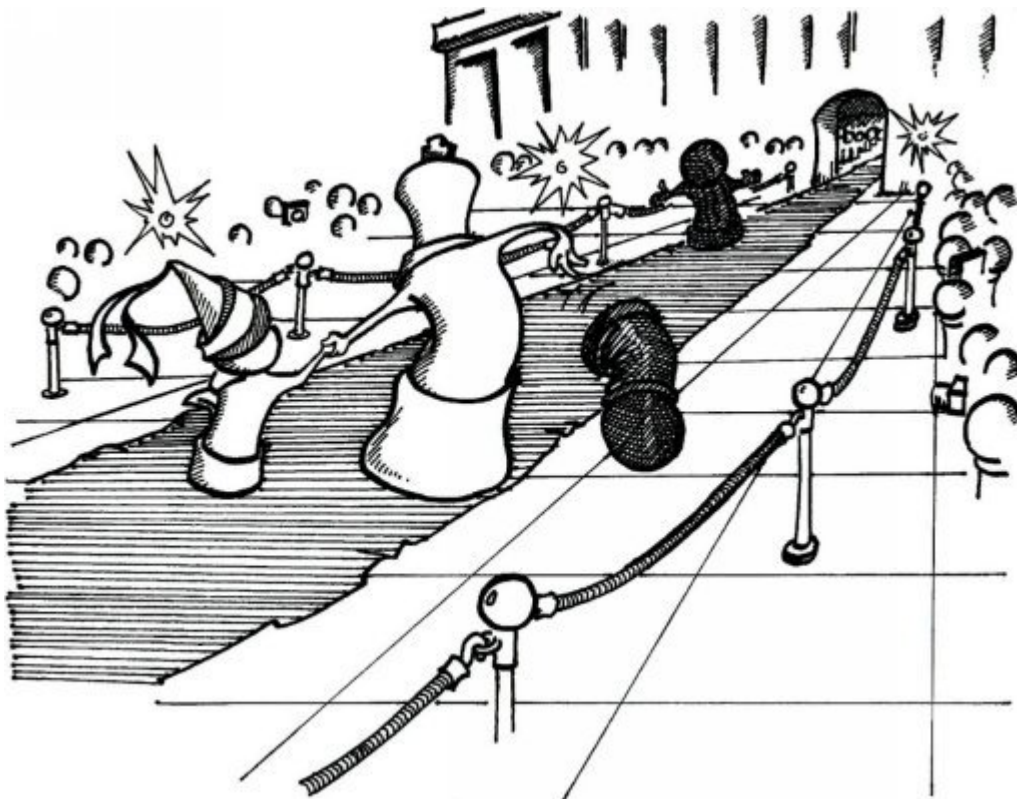


“In the ending, we must convert into a win any advantages won during the opening or middlegame.”

Paul Keres

LESSON 3

CREATING PASSED PAWNS



“A passed pawn increases its strength as the number of pieces on the board diminishes.”

José Raúl Capablanca



A passed pawn, often referred to as a *passer*, is a pawn that can advance to the 8th rank and promote where the opponent doesn't have a pawn on the same or an adjacent file to stop it. Without an enemy pawn to prevent it from advancing, the opponent must use a piece to prevent the promotion.

Creating a passed pawn is essential to winning most endgames since a pawn must become passed before it can promote.

You want to create passed pawns for yourself while preventing your opponent from creating them.

When a player has a pawn majority (more pawns than the opponent) on part of the board, creating a passed pawn is relatively easy.

Passed pawns are easier to create in asymmetrical pawn structures than symmetrical ones since at least one of the pawns is unopposed.

Pawns can move forward, called pushing a pawn, sit where they are, or capture an enemy piece or pawn. These choices are often referred to as push, sit, or take.

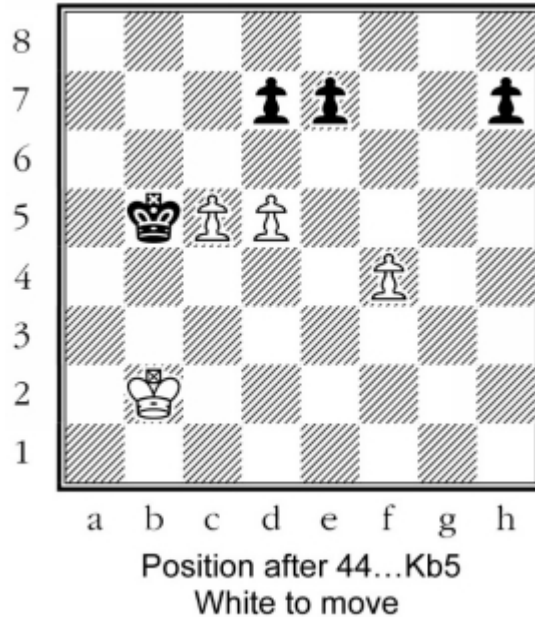
All the possible pawn pushes, sits, and takes need to be carefully examined when calculating pawn battles. Calculate every combination of pawn movement as many moves deep as you can. Amateur chess players tend to notice all the pawn captures; it is usually the pawn pushes that tend to get overlooked.

If there are other pieces nearby, you can add those into your analysis after you isolate and understand the dynamics of the pawn battle.

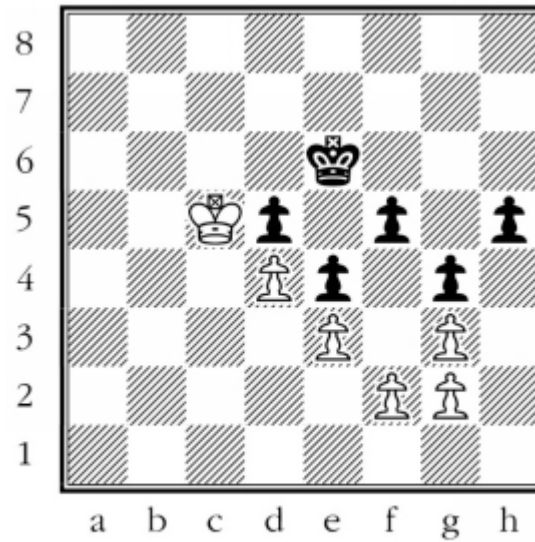
In this lesson, we will examine pawn battles and sacrificing pieces to create passed pawns as well as how to lock up the pawn structure to prevent your opponent from creating a passed pawn.

Pawn battles to create a passed pawn

Passed pawns are most commonly created when pawns clash in battle.
It is important to carefully analyze each possible push, sit, and take for all the pawns involved.

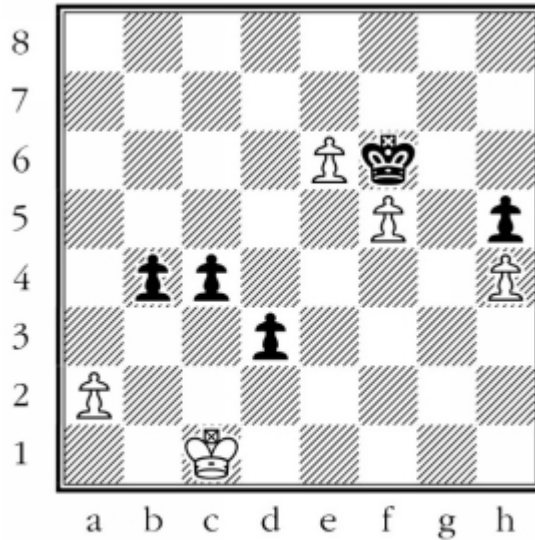


Black has the more centralized king and outside passed pawn on h7.
White wins by playing **45.c6!** 45.d6? e6 wins for Black since he can prevent White from creating a passed pawn.
45...dxc6 45...Kb6 46.d6! wins for White.
46.d6! creating a passed f-pawn by forcing Black to capture the d-pawn.
46...exd6 **47.f5** White's pawn can promote since Black's queenside pawns block Black's king from catching the passed f-pawn. If 47...h5, White's f-pawn will promote ahead of Black's h-pawn.



Position after 48.Kc5
Black to move

Black can create a winning passed pawn on the kingside with **48...f4!**
49.exf4 49.gxf4 h4 with the threat of 50...h3 or 49.Kc6 h4 50.exf4 h3 win for Black.
49...h4! 50.gxh4 g3 51.fxg3 e3 White can't stop Black's e-pawn from promoting.



Position after 37.Kc1
Black to move

Both players have advanced connected passed pawns.

Without help from the king, White cannot safely advance the e- or f-pawn. Black's king can't capture the f5 pawn without leaving the square of the e6 pawn.

Black wins by advancing the b-pawn with **37...b3!** 37...c3 38.Kd1 is drawn since Black's pawns can't promote without help from the king.

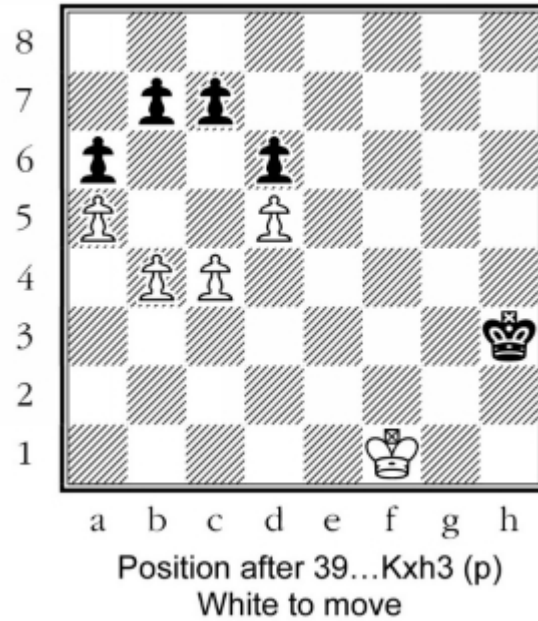
37...Ke7 38.Kd2 Kf6 39.Ke3 is also drawing since White's king can move back and forth between e3 and d2 to prevent Black's pawns from safely advancing.

38.axb3 Losing is 38.a4 c3 39.a5 d2+ 40.Kd1 b2 41.Kc2 b1=Q+ 42.Kxb1 d1=Q+.

38...cxb3 White is in zugzwang.

39.Kb2 39.Kd2 b2 and the b-pawn promotes.

39...d2 and the d-pawn promotes.



White has an advantage since his pawns are further up the board than Black's.

White wins by playing **40.c5**.

Also winning for White is 40.b5 Kg4 41.c5! threatening to create a passed pawn by pushing either the b- or c-pawn. 41...dxc5 42.b6 cxb6 43.d6 and Black's king is outside the square of the d6 pawn.

40...Kg4 40...dxc5 41.bxc5 Kg4 42.d6 creating a passed pawn that Black's king cannot catch.

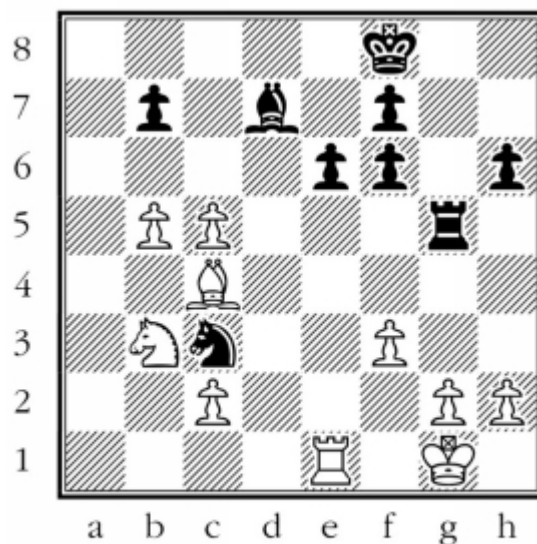
41.c6 41.b5 also wins by transposing to a previous variation above.

41...bxc6 **42.dxc6** **Kf5** **43.b5** **axb5** **44.a6** and the a6 pawn can promote in a couple moves.

Sacrifice to create a passed pawn

Passed pawns are often created as a result of a sacrifice.

It is important to find a way to promote the passed pawn or gain some other advantage in order to justify the sacrifice.



Position after 28...Nc3

White to move

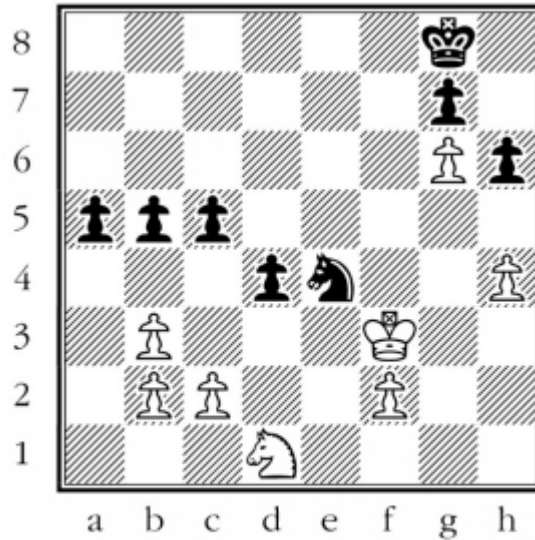
White sacrifices a pawn to create a passed pawn by playing **29.c6!**

29...bxc6 29...Bc8 30.Ra1 Rg8 31.Ra8 Kg7 32.cxb7 Bxb7 33.Rxg8+ Kxg8 34.Nc5 Bc8 35.b6 followed by 36.b7 is winning for White.

30.b6 creating a passed b-pawn.

30...Bc8 31.Ra1 Rg8 **32.Ra8 Kg7** 32...Ke7 doesn't protect the rook after 33.b7.

33.Nc5 White has winning threats of 34.b7 and 34.Ba6. Black will have to give up material to stop the pawn.



Position after 41.Kf3
Black to move

Black has a pawn majority on the queenside.
White's king is more centrally located.

Black sacrifices the knight to create a passed pawn by playing **41...Nc3!**

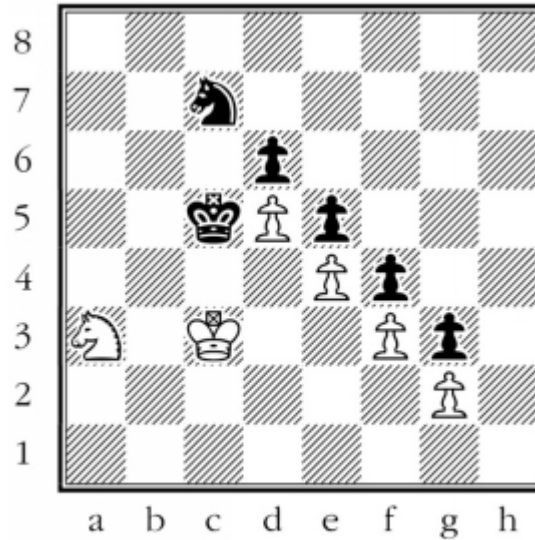
42.bxc3 White's b2 pawn is no longer protecting the a3 square. **42.Nxc3 dxc3 43.bxc3 a4** is winning for Black since White's king is outside the square of the soon to be passed a-pawn.

42...a4 threatening to create a passed a-pawn.

43.cxd4 cxd4 preventing White's knight from moving to c3 to protect the a2 square.

44.c3 a3 Losing is **44...dxc3? 45.Nxc3**. White's knight cannot prevent the passed a-pawn from promoting.

Symmetrical pawn structures tend to be drawish since each player's pawns are blocked by enemy pawns.



Position after 46.Kc3
Black to move

Black sacrifices the knight to create asymmetry with **46...Nxd5+!**

47.exd5 Refusing the sacrifice with **47.Kd3** loses the g2 pawn after **47...Ne3**.

47...e4! Black threatens **48...exf3** to create a passed pawn further away from White's king.

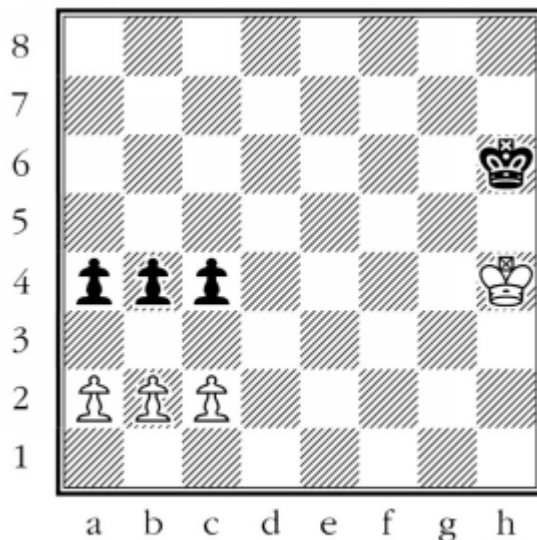
48.Nc4 **48.fxe4 f3** **49.gxf3 g2** and the g-pawn can promote.

48...exf3 **49.Nd2 f2!** **49...fxg2?** **50.Nf3** **Kxd5** **51.Kd3** and White successfully blockades the pawns to draw the game.

50.Kd3 f3! **51.gxf3 g2** and Black will promote the g-pawn.

Prevent your opponent from creating a passed pawn

Preventing your opponent from creating a passed pawn is as important as creating a passed pawn for yourself.



Position after 51...b4
White to move

The kings are too far away from the pawn battle on the queenside to be of immediate assistance to the pawns.

Black threatens to create a passed pawn with 52...b3 53.cxb3 (53.axb3 c3 54.bxc3 a3) 53...a3 54.bxa3 c3.

White draws with **52.b3!** Black cannot create a passed pawn without help from White. 52.a3? c3 53.bxc3 b3 (or 53...bxa3) or 52.c3? a3 53.b3 cxb3 (or 53...bxc3) create a passed pawn for Black.

52...axb3 52...cxb3 53.cxb3 axb3 54.axb3 transposes to the main line below.

53.axb3 White keeps the pawn structure symmetrical.

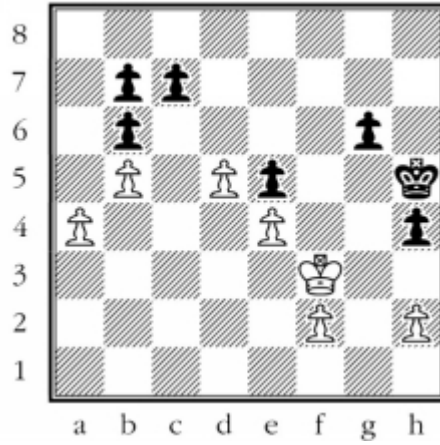
53...cxb3 53...c3? leaving two pawns for each side loses since White's king can move to the queenside and capture both of Black's pawns and win the resulting ending.

54.cxb3 Kg6 55.Kg4 Kf6 56.Kf4 Ke6 57.Ke4 Kd6 58.Kd4 Kc6 59.Kc4 Kb7! Not 59...Kb6? 60.Kxb4 giving White the opposition. **60.Kxb4 Kb6** is drawn since Black has the opposition.

Basset Hound Problems



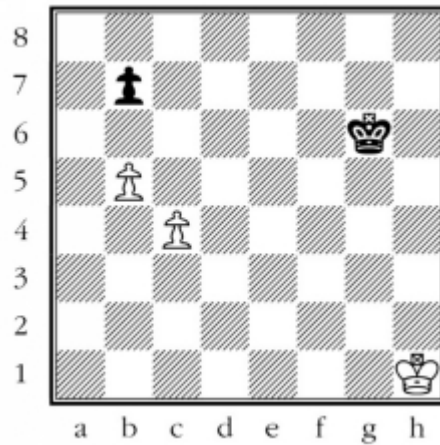
3-1



Position after 37...Kh5
What is White's best move?



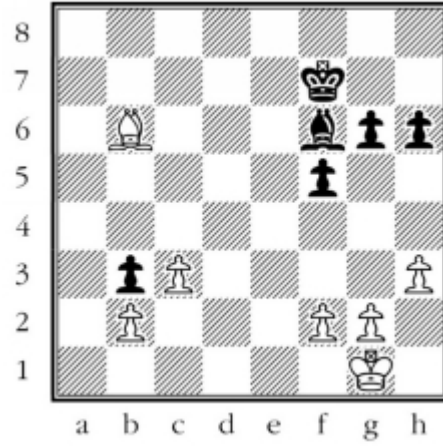
3-2



Position after 43...Kg6
How does White win the game?



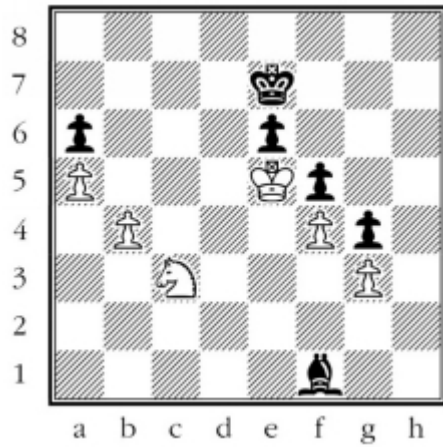
3-3



Position after 38.Bxb6 (R)
What is Black's best move?



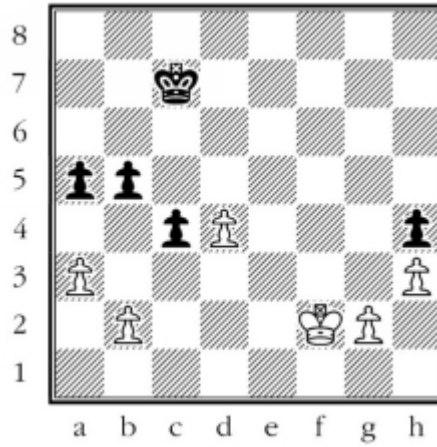
3-4



Position after 45...Ke7
What is White's best move?



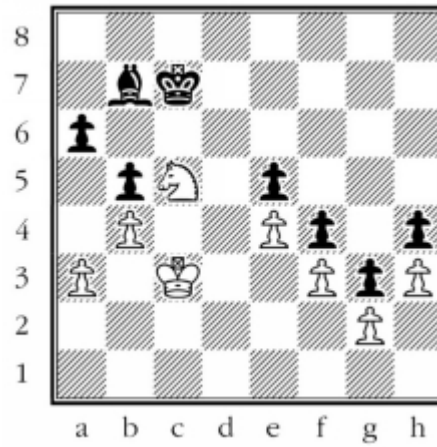
3-5



Position after 50.cxd4 (B)
 What is Black's best move?



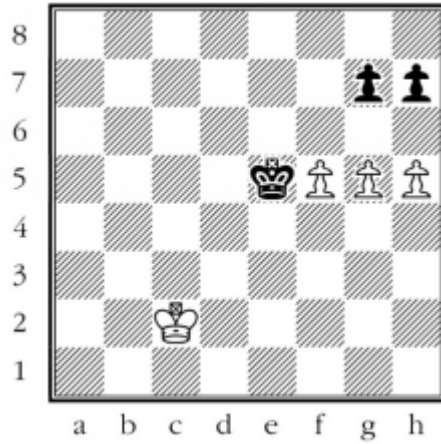
3-6



Position after 41.Nc5
 How does Black win the game?



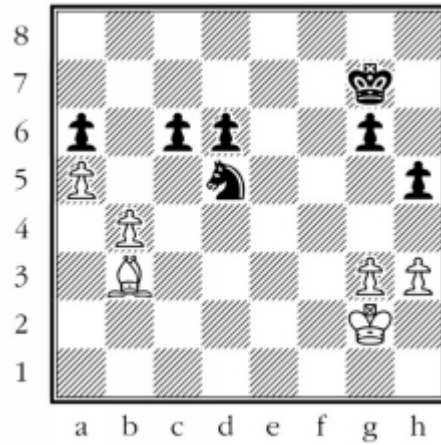
3-7



Position after 68...Ke5
 What is White's best move?



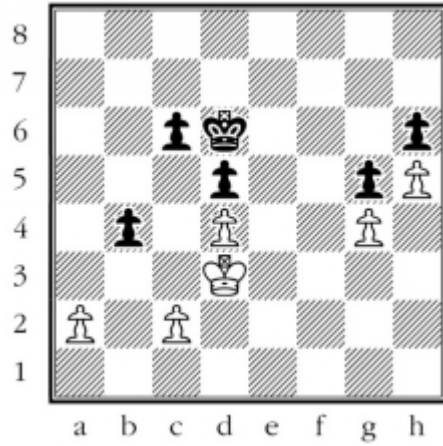
3-8



Position after 37...bxc6 (N)
 What is White's best move?



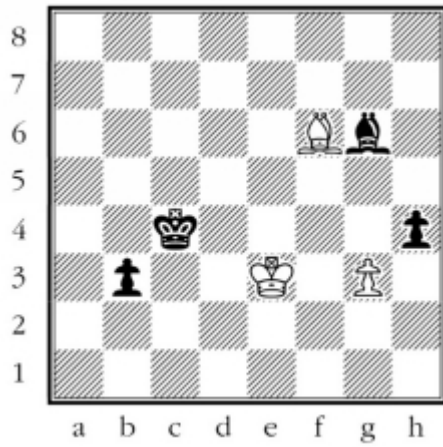
3-9



Position after 51...Kd6
 What is White's best move?



3-10

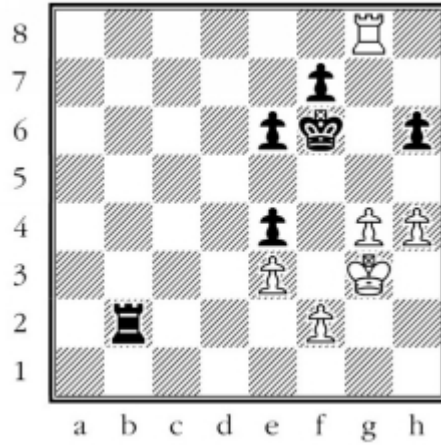


Position after 59.hxg3 (p)
 How does Black win the game?

Chess Detective Problems



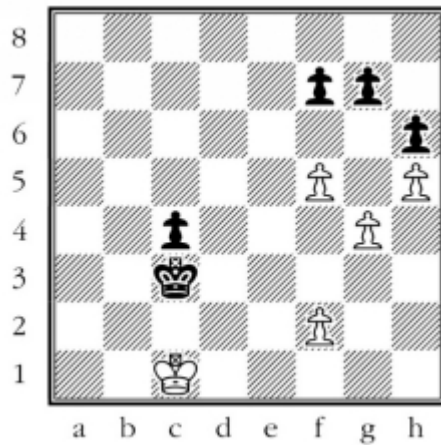
3-11



Position after 38...h6
How does White win the game?



3-12



Position after 44...h6
What is White's best move?



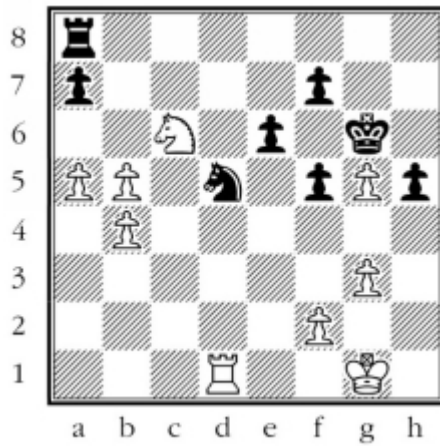
3-13



Position after 43.a4
What is Black's best move?



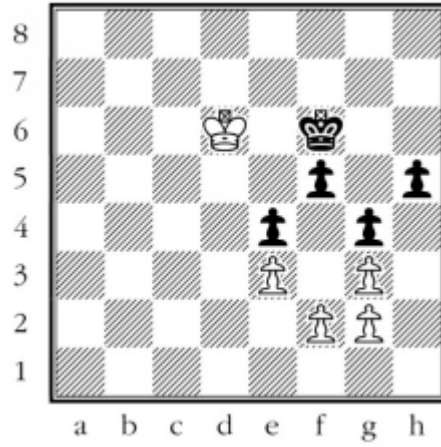
3-14



Position after 41...Kg6
What is White's best move?



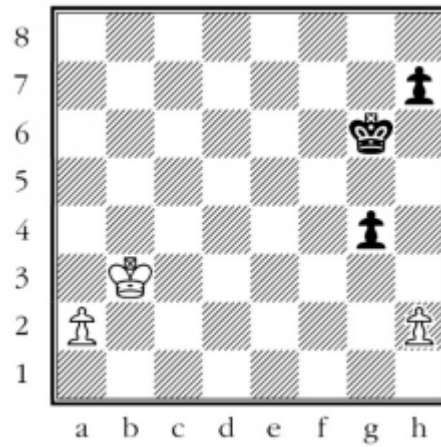
3-15



Position after 42.Kd6
How does Black win the game?



3-16



Position after 51.Kxb3 (R)
What is Black's best move?



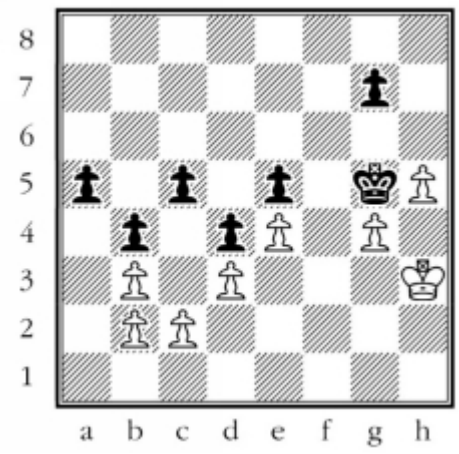
3-17



Position after 42...Nd8
 What is White's best move?



3-18



Position after 34.g4
 What is Black's best move?



3-19



Position after 36.Bd8
 How does Black win the game?



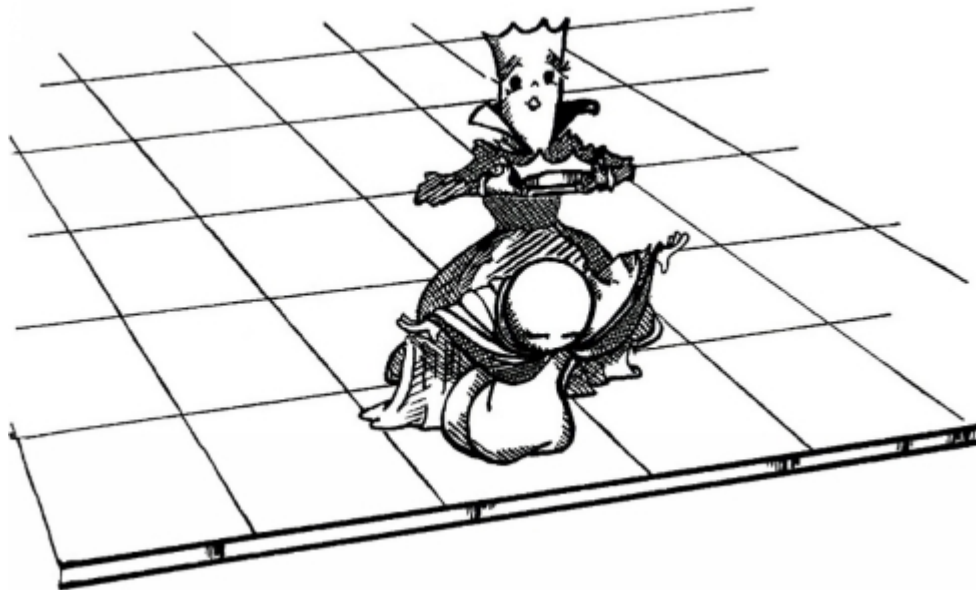
3-20



Position after 34.Rxf1 (B)
 What is the best move for Black?

LESSON 4

PROMOTING PAWNS



“The main theme of the endgame is the process of promoting pawns into queens. Pawns in the endgame gain in strength considerably, especially if they are passed.”

Mark Dvoretsky



When a passed pawn reaches the 8th rank, the rules of chess require that the pawn is promoted on that square to the player's choice of a queen, rook, bishop, or knight.

Since she is the most powerful piece, the vast majority of the time pawns are promoted to a queen, sometimes called *queening* a pawn.

In rare instances it is better to *underpromote* the pawn to a rook, bishop, or knight, such as to avoid a stalemate. Knights have unique powers different from the queen.

The choice of the new piece is not limited to previously captured pieces. For example, a player may have two or more queens on the board at the same time.

Promoting a passed pawn is one of the predominant themes in the endgame since introducing a queen back onto the board gives the player a huge material advantage that is usually enough to win.

The defender often has to sacrifice a piece to prevent the pawn from promoting or eliminate the new queen on the promotion square.

If you can't capture your opponent's passed pawn, blocking it is the best way to prevent it from promoting.

Usually, it is best to block passed pawns with a king, knight, or bishop.

Try to avoid using a rook or queen to block a passed pawn since they are more powerful pieces that are better deployed elsewhere. Using a major piece as a blockader also puts it in danger since the blockader is a stationary target for the opponent to attack.

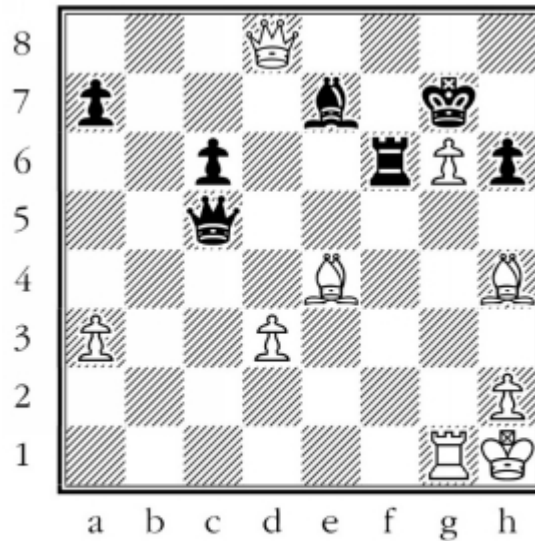
In this lesson we will examine methods to promote pawns like clearing a path for the pawn, blocking defenders, and protecting the promotion square.

We will also take a look at pawn storms and underpromotion.

Several of these concepts are often present at the same time.

Clearing the path to promote

Although pawns typically promote in the endgame when most of the defending pieces have been exchanged, they can also be promoted in the middlegame.



Position after 32...Be7
White to move

White is ahead a bishop and pawn with an attack on Black's king.

Black's king blocks the passed pawn on g6.

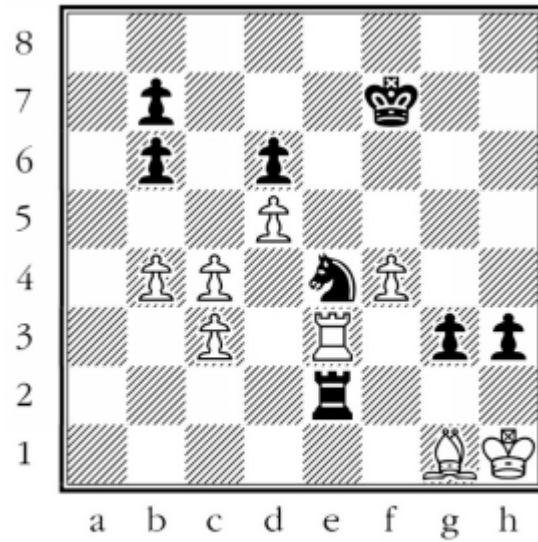
White promotes the pawn and forces mate by sacrificing the queen to clear a path for the pawn by playing

33.Qh8+!

33...Kxh8 34.g7+ Kg8.

White now sacrifices the bishop to clear the g8 promotion square with **35.Bh7+.**

35...Kxh7 36.g8=Q mate.

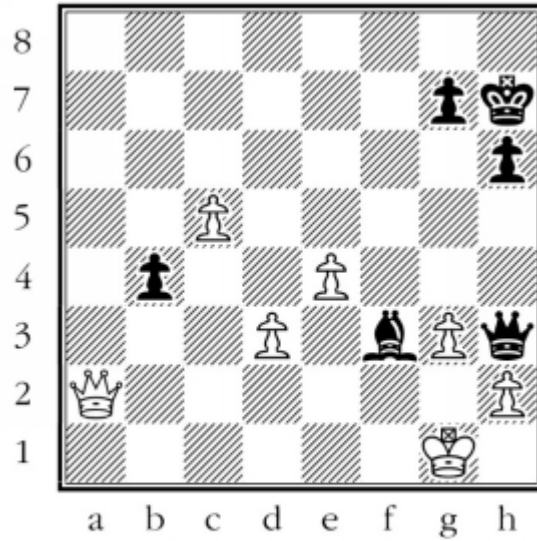


Position after 41.Re3
Black to move

Black would like to promote one of the connected passed pawns.

41...Nf2+ Black can also win with 41...Rxe3 42.Bxe3 Nf2+ 43.Bxf2 (43.Kg1 h2+ 44.Kg2 h1=Q+) 43...gxf2 and the f-pawn can promote the next move. Often there is more than one way to promote a pawn.

42.Bxf2 gxf2 43.Rf3 Re1+ 44.Kh2 f1=Q promoting the pawn.



Position after 37.c5
Black to move

Black is ahead in material a bishop to two pawns.

Both players would like to promote their passed pawns.

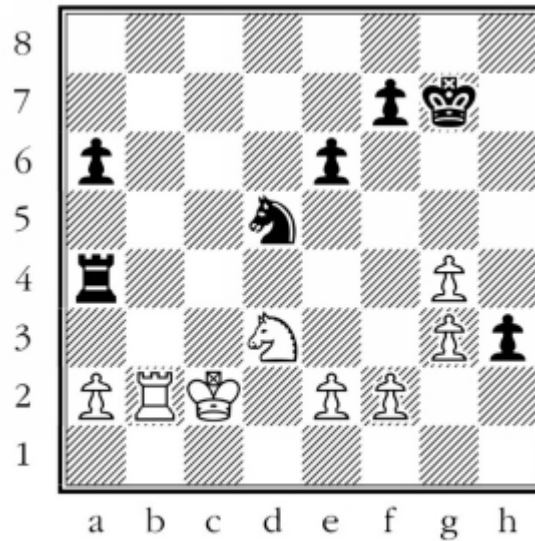
White's queen has to guard the mate threat on g2 and stop Black's b-pawn.

37...b3! gaining a tempo in the pawn race by attacking White's queen. **37...Qg2+?** **38.Qxg2 Bxg2 39.Kxg2 b3**
40.c6 b2 41.c7 b1=Q 42.c8=Q Qxd3 leaves White ahead by a pawn with queens on the board.

38.Qb2 White's queen must protect g2.

38...Qg2+! **39.Qxg2 Bxg2 40.Kxg2 b2 41.c6 b1=Q** Black promotes first and will be able to capture White's pawns.

Blocking defenders



Position after 32.Kc2
Black to move

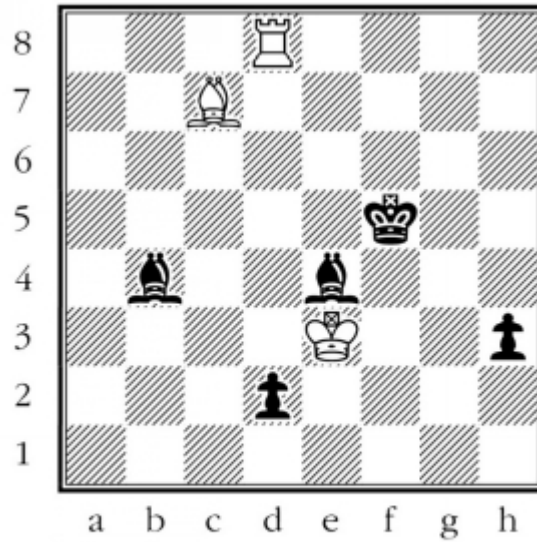
Black would like to promote the passed pawn on h3. White's rook is the only piece that can stop the pawn by retreating to the first rank.

32...Rc4+ 33.Kd2 33.Kb3 Rc3+ 34.Ka4 Rxd3 35.exd3 h2 and if **36.Rb1**, then **36...Nc3+** forks White's king and rook.

33...Rc1! preventing White from playing **34.Rb1** to stop the h-pawn.

34.Kxc1 34.Nxc1 also loses since the knight on c1 would also interfere with White's rook defending the h1 promotion square. **34.f3 h2 35.Nf2 Rf1** threatens to eliminate the knight so the pawn can promote.

34...h2 White can't stop the pawn from promoting.



Position after 37.Rd8
Black to move

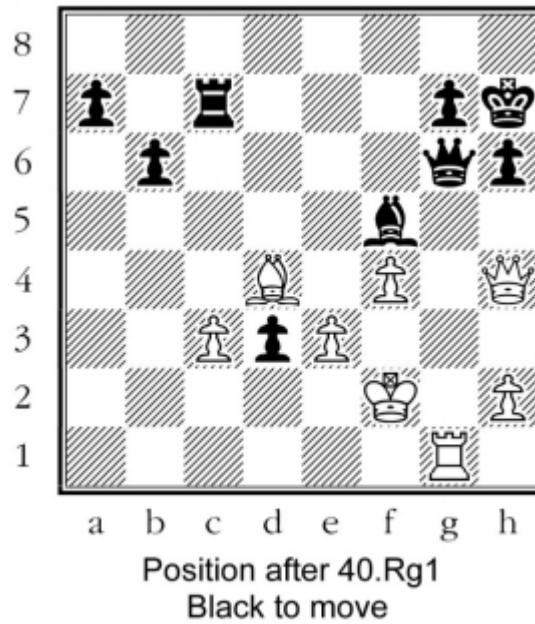
White's bishop defends h2 and the rook defends d1 in order to stop Black's pawns from promoting.

Black attacks White's bishop and interferes with both defenders by playing **37...Bd6!**

38.Rxd6 38.Bxd6 d1=Q promotes the d-pawn.

38...h2 39.Rxd2 h1=Q promoting the h-pawn with a winning position.

Protecting the promotion square

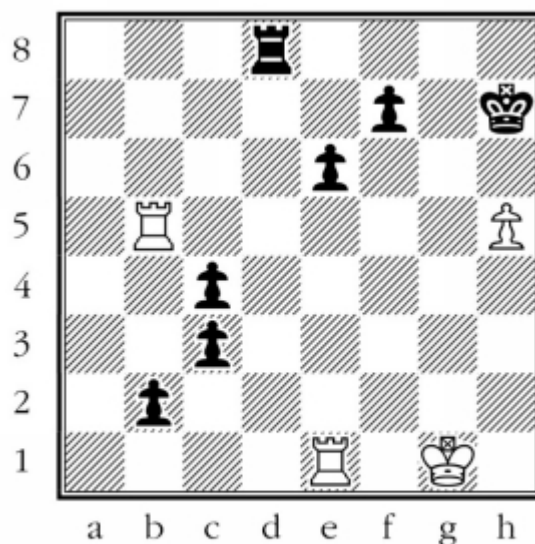


Black would like to promote the d3 pawn and clears the path for the pawn by playing **40...Qxg1+!**
41.Kxg1 d2 42.Qh5 defending the d1 promotion square.
42...Bc2 protecting the d1 square.
The pawn can now safely promote, leaving Black a rook ahead in material.

Pawn storm

A *pawn storm* is when several pawns on adjacent files are moved in rapid succession toward the opponent's defenses.

The pawns can be difficult to stop because they protect each other in their march up the board.



Position after 46.Rb5

Black to move

The pawns in Black's queenside pawn storm are close to promoting.

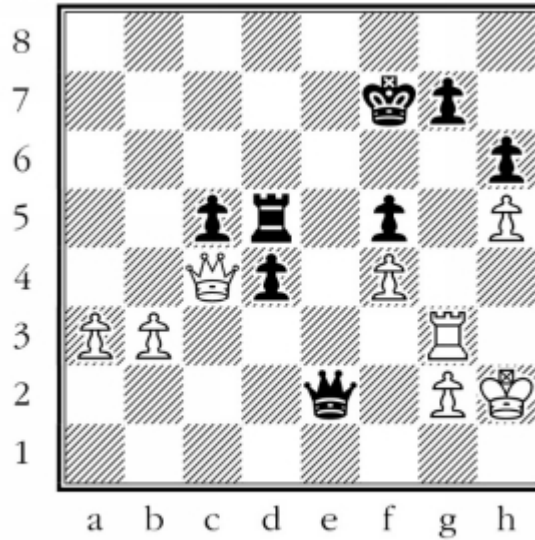
White's rooks appear to have the pawns stopped.

46...Rd1! pinning White's rook to the king and blocking the rook from defending against the queenside pawn advancement.

47.Rxd1 c2 gaining an important tempo by attacking the rook.

48.Rf1 c1=Q promoting the first pawn.

Black can advance the c4 pawn and soon threaten to promote a second or maybe even a third pawn, though that isn't necessary to win the game.



Position after 44.Qc4
Black to move

Material is even and both players have passed pawns.

Black trades queens to simplify to a winning endgame with **44...Qxc4!**

45.bxc4 d3! Black offers the rook to connect the pawns. 46...d2 is threatened.

46.cxd5 c4 protecting d3 and threatening to safely advance the d-pawn.

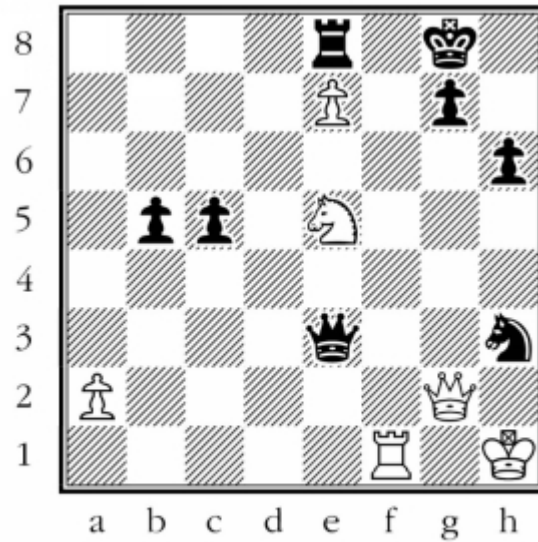
47.Rf3 d2 48.Rf1 retreating the rook in an attempt to stop the pawn storm.

48...c3 49.Rd1 c2 50.Rxd2 c1=Q Black succeeded in converting the pawn storm into a winning ending with a material advantage of a queen against a rook and two pawns.

Underpromotion

In most positions, pawns should promote to a queen because she is the most powerful and valuable piece.

Underpromotion is a unique situation when it is better to promote to a less valuable piece. A knight is usually chosen because a knight's powers are different from those of the queen.



Position after 37...Qxe3 (R)
White to move

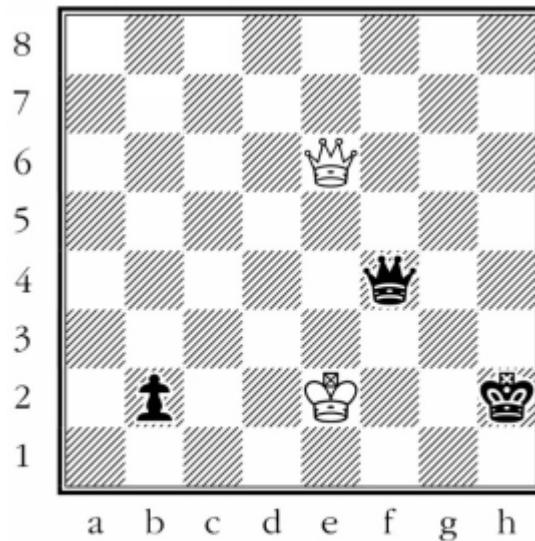
Black has two additional pawns, but White has a dangerous passed pawn on e7 that is close to promoting.

38.Rf8+! Rxf8 38...Kh7 39.Qg6 mate.

39.Qd5+ Kh7 40.exf8=N+! keeping Black's king in check by underpromoting to a knight. **40.exf8=Q? Qg1 mate.**

40...Kh8 41.Neg6 mate.

Due to stalemate possibilities, on rare occasions underpromoting to a rook wins where promoting to a queen draws.



Position after 70.Ke2
Black to move

The natural promotion to a queen with 70...b1=Q? draws because of 71.Qh3+! Kg1 (71...Kxh3 stalemate)
72.Qg2+ Kxg2 stalemate.

Black wins by underpromoting to a rook with **70...b1=R!**

71.Qa2 Other moves for White are no better because of a series of forced checks by Black's queen and rook.
For example 71.Kd3 Rd1+ 72.Kc2 Rd2+ 73.Kb3 Rd3+ 74.Kc2 Qd2+ 75.Kb1 Qb4+ 76.Kc1 Qc3+ 77.Kb1
Rd1+ 78.Ka2 Ra1 mate.

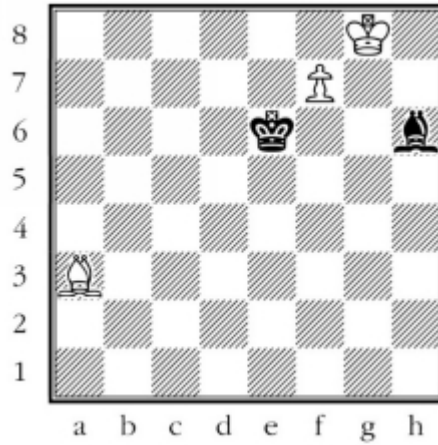
71...Qe4+ 72.Kf2 72.Kd2 Qg2+ skewers the king and queen.

72...Rg1 threatening 73...Rg2+ as well as mate threats utilizing the queen and rook.

Basset Hound Problems



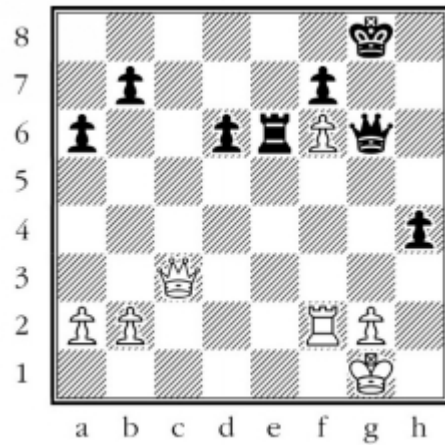
4-1



Position after 51...Ke6
How does White win the game?



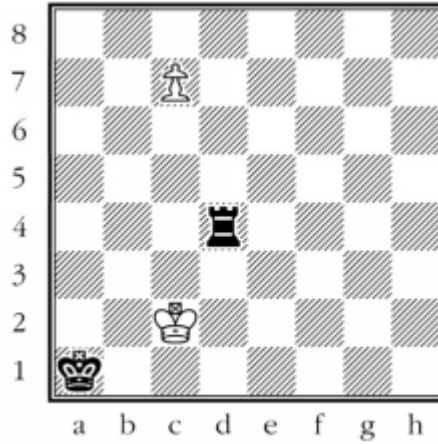
4-2



Position after 65...h4
How does White win the game?



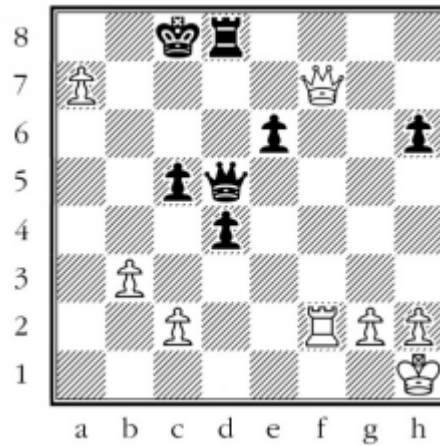
4-3



Position after 49...Rd4
What is the best move for White?



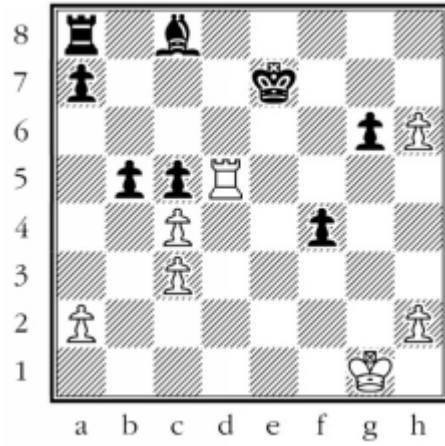
4-4



Position after 43...h6
What is the best move for White?



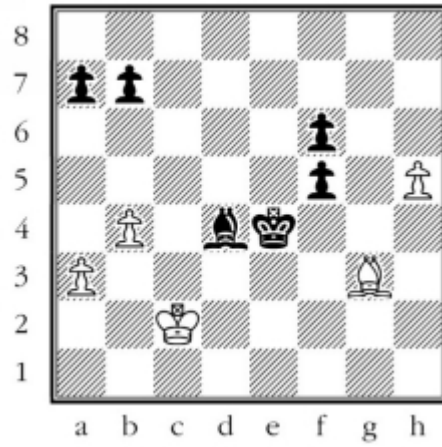
4-5



Position after 30...Kxe7 (p)
 What is White's best move?



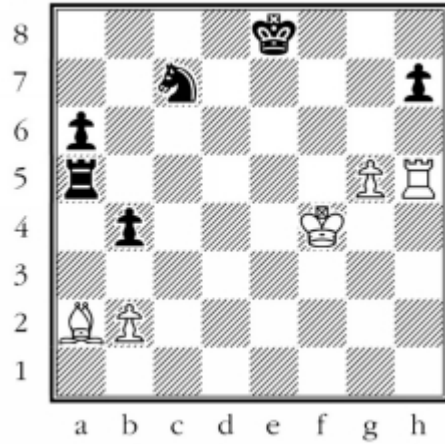
4-6



Position after 38...Ke4
 What is White's best move?



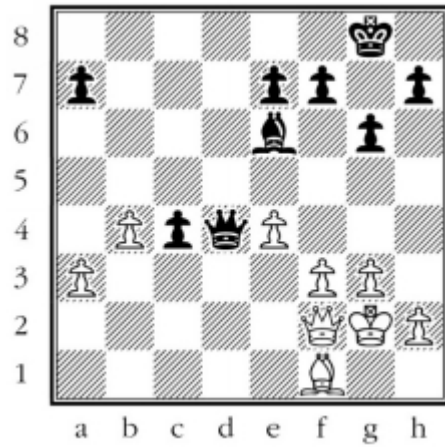
4-7



Position after 54...Rxa5 (p)
 What is White's best move?



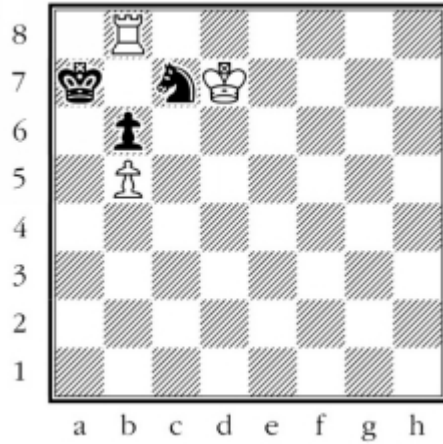
4-8



Position after 30.Qf2
 How does Black win the game?



4-9



Position after 47...Nxc7 (B)
How does White win the game?



4-10

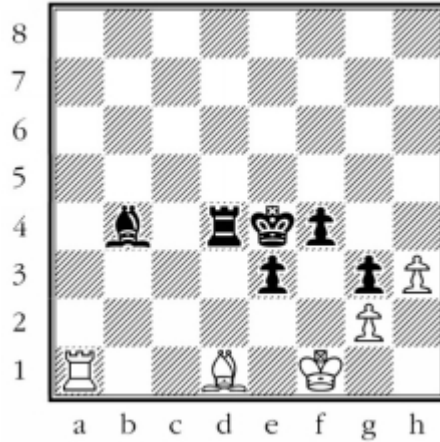


Position after 38...Kf7
How does White win the game?

Chess Detective Problems



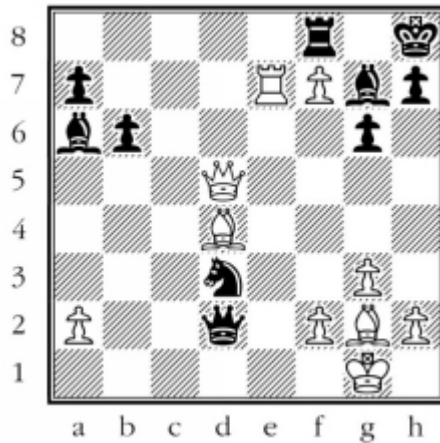
4-11



Position after 38.Bd1
What is Black's best move?



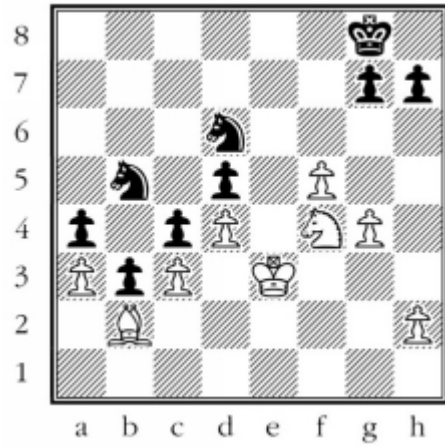
4-12



Position after 24...Qxd2 (N)
How does White win the game?



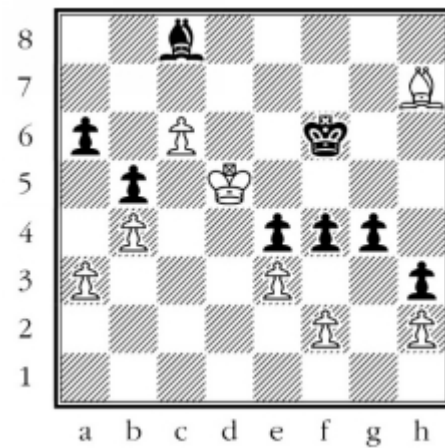
4-13



Position after 36.Nf4
 What is Black's best move?



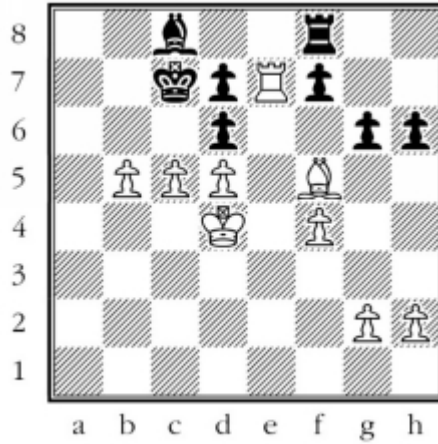
4-14



Position after 44.Bh7
 How does Black win the game?



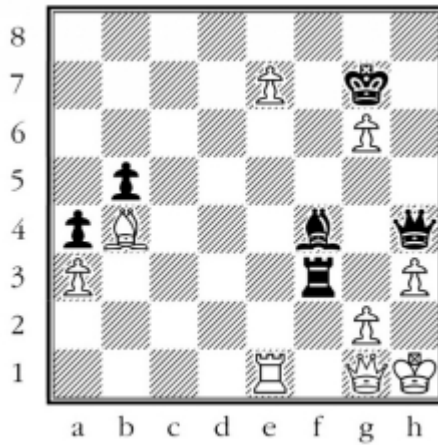
4-15



Position after 39...g6
 What is White's best move?



4-16



Position after 40...Rf3
 How does White win the game?



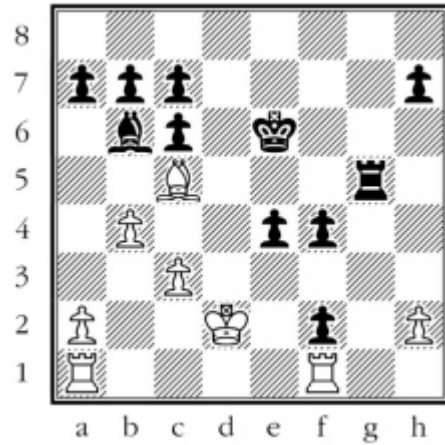
4-17



Position after 47...a3
 How does White win the game?



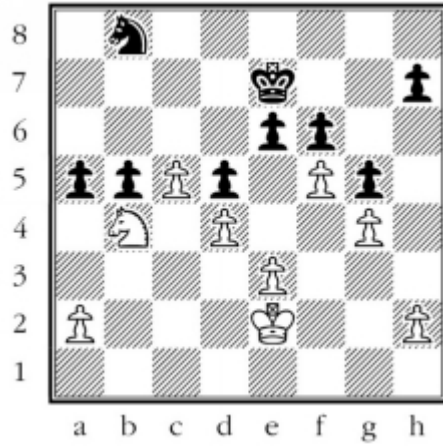
4-18



Position after 27.Bc5
 What is Black's best move?



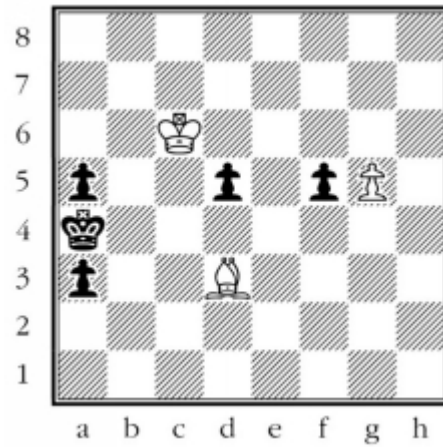
4-19



Position after 28...a5
 What is White's best move?



4-20



Position after 42...Kxa4 (R)
 How does White win the game?

LESSON 5

ACTIVATING THE KING



“The king, which during the opening and middlegame stage is often a burden because it has to be defended, becomes in the endgame a very important and aggressive piece, and the beginner should realize this, and utilize his king as much as possible.”

José Raúl Capablanca



The king is a strong short-range piece that should be involved in the battle once he is safe from checkmate threats. In the endgame, his strength is about four pawns, somewhere between that of a minor piece and a rook.

A fundamental endgame strategy is to move the king toward the center into the action where he can quickly reach any part of the board. The further you can advance your king into your opponent's territory, often the better.

Recall in Lessons 1 and 2 we examined the importance of king position in opposition, outflanking, and counting races.

Generally, it is safe for the king to move toward the center after the opponent's queen and half the rooks, bishops, and knights are captured.

Moving toward the center also prevents the king from being restricted on the edge of the board, where he can be trapped like in a back rank checkmate.

Preventing your opponent's king from centralizing is as important as activating your king. A rook on the 7th rank often cuts off the enemy king from entering the game.

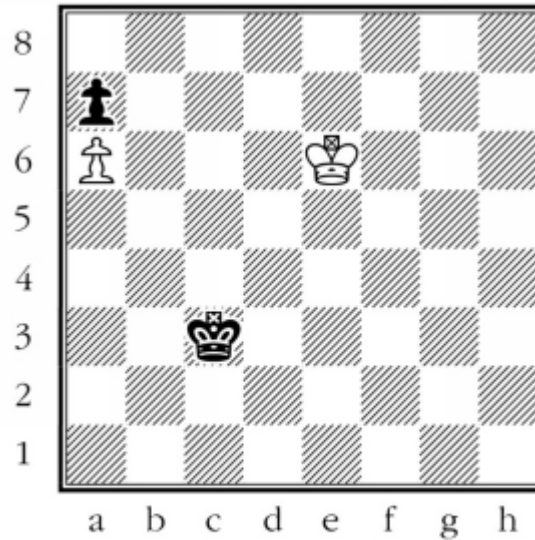
Kings are good at escorting passed pawns, blocking passed pawns, and blocking the opponent's king.

Weak pawns are often exploited by attacking them with the king. The success of such an attack depends on the ability of the king to penetrate the opponent's defenses.

In this lesson, we will discuss how to gain ground with the king by moving diagonally, cut off the opponent's king from entering the battle, identify and create a path for the king to invade, and win the endgame with a superior king position.

Diagonal path

When kings move diagonally, they take a step on a file and a rank simultaneously, covering more distance than moving vertically along a file or horizontally along a rank.



Position after 46...Kc3
White to move

Both kings are rushing toward the queenside pawns.
Heading straight for the pawns only draws after 47.Kd6 Kd4 48.Kc6 Ke5 49.Kb7 Kd6 50.Kxa7 Kc7 because
White's king is trapped in front of the pawn.

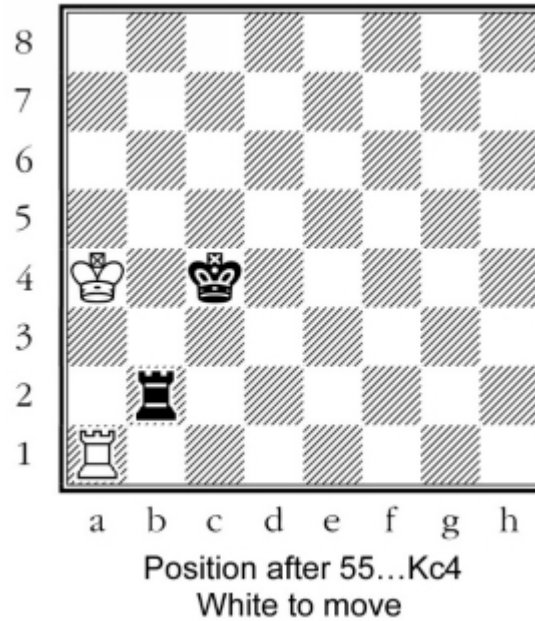
White gains an important tempo blocking Black's king by moving diagonally with **47.Kd5!**

47...Kd3 47...Kb4 48.Kc6 Ka5 49.Kb7 wins for White.

48.Kc6 Kd4 49.Kb7 Kc5 50.Kxa7 Kc6 51.Kb8 Kb6 52.a7 and White will promote the a-pawn.

Cutting off the opponent's king

Because king positioning is vital in the endgame, cutting off the opponent's king is an important skill to master. Rooks cut off kings along ranks and files.



Although the king is pinned against the edge of the board on the a-file, White can draw by playing **56.Rc1+**.

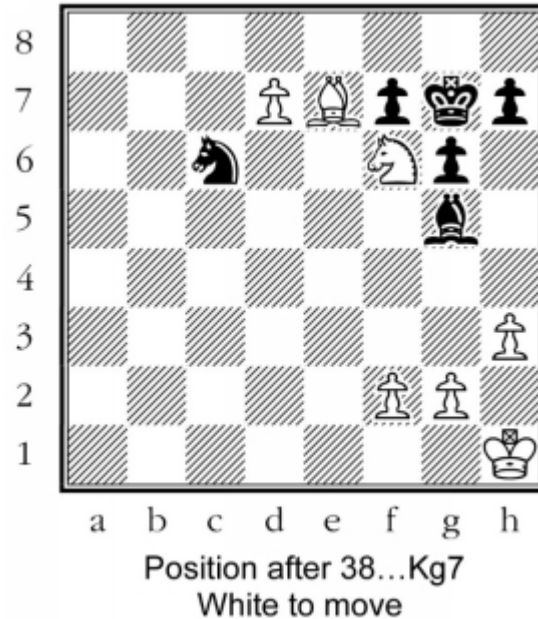
After **56...Kd4**, Black's king is cut off from moving back to the c-file to create checkmate threats.

In the actual game, White lost by playing 56.Ra3?

Black played 56...Rb8, threatening mate on a8. 57.Ka5 Ra8+ 58.Kb6 Rxa3 winning the rook.

King trapped on edge of board

Kings on the edge of the board are limited in the number of squares available to them and are vulnerable to checkmate.



White wins by chasing Black's king along the edge of the board in an attempt to checkmate him.

39.Ne8+ Also winning is 39.d8=Q Nxd8 40.Ne8+ Kh6 41.Bf8+ Kh5 42.Ng7+ Kh4 (42...Kh6 43.Nf5++ Kh5 44.g4 mate) 43.Kh2 Bf4+ (43...Bf6 44.g3+ Kg5 45.f4+ Kh6 46.Nf5++ Kh5 47.g4 mate) 44.g3+ Kg5 45.Be7+ Kh6 46.gxf4 winning the bishop.

39...Kh6 to defend the bishop.

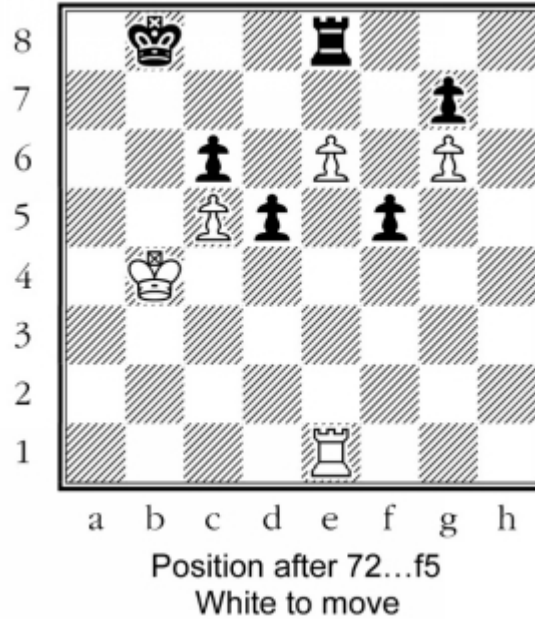
40.Bf8+ Kh5 41.Ng7+ Kh4 41...Kh6 42.Nf5++ Kh5 43.g4 mate like above.

42.Kh2 Bd8 42...Bf4+ 43.g3+ is winning for White.

43.f4 followed by **44.g3 mate**.

Invasion paths

Once the king is activated, he seeks a path to invade the opponent's territory.



Black's last move 72...f5 (from f6) was a mistake that opens a path for White's king to invade Black's position via e5.

Black should have played 72...Re7 or 72...Kc7.

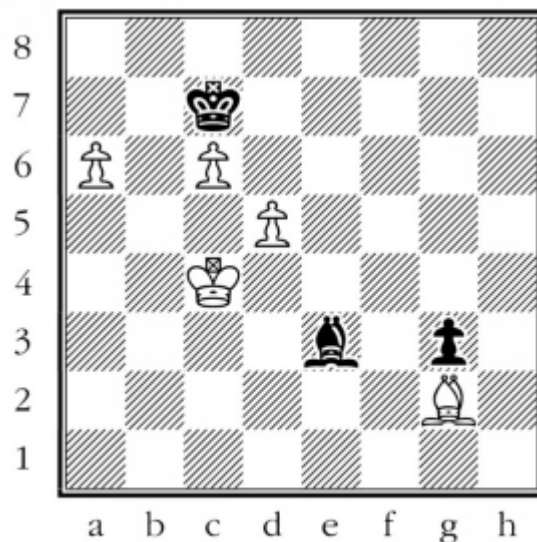
73.Kc3 Kc7 74.Kd4 Ra8 Black attempts to activate the rook.

75.Ke5 75.Rh1 with idea of moving the rook to h7 is also winning.

75...Ra2 76.e7 Kd7 77.e8=Q+ White sacrifices the pawn to force Black's king to retreat, creating a path White's king to advance further.

77...Kxe8 78.Kd6+ Kd8 79.Re7 d4 80.Rxg7 capturing a pawn and threatening mate.

The game concluded **80...Kc8 81.Rc7+ Kb8 82.g7 Rg2 83.Rf7 Rg6+ 84.Ke5 d3 85.Rf8+ Ka7 86.g8=Q Rxg8 87.Rxg8**. White can stop Black's passed pawns and win the game.



Position after 58...Be3
White to move

Black tries to draw by blockading White's passed pawns on the dark squares.

59.Kd3 White's king journeys to the kingside to circle back around via the eighth rank to help the pawns advance.

59...Ba7 60.Ke4 Kd6 61.Kf5 61.Kf4 Bf2 62.Bf3 also wins since Black either has to move the bishop away from protecting the g2 pawn or retreat the king and allow 63.Ke5.

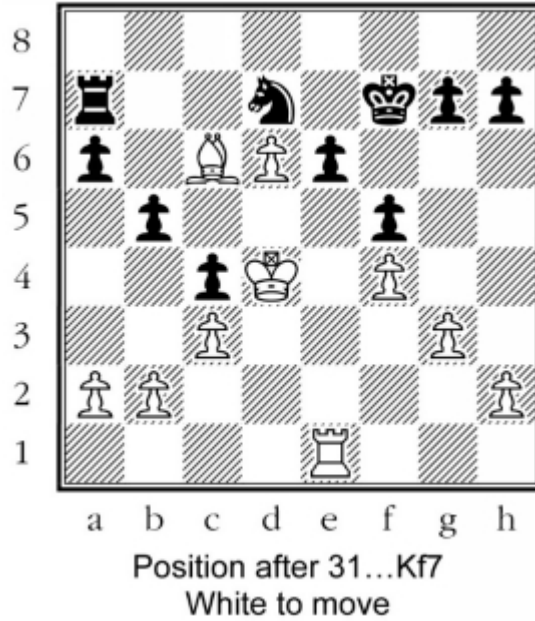
61...Bc5 62.Kf6 Be3 63.Kf7 Bc5 64.Ke8 Kc7 Protecting d8 with 64...Bb6 loses to 65.Bf3 Kc7 66.Ke7 Bc5+ 67.Ke6 transposing to the game position below.

65.Bf3 Ba7 66.Ke7 Bc5+ 67.Ke6 Black is in zugzwang and has to relinquish control of a7 or d6.

67...Kb6 68.d6 Kxa6 69.c7 and White's c-pawn will promote.

Creating a path to invade

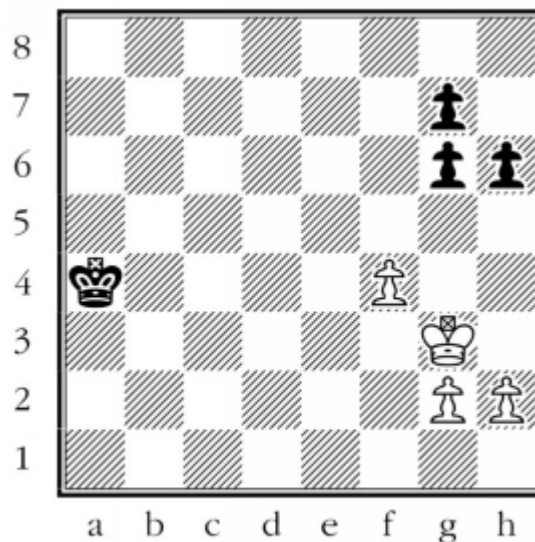
If an invasion path doesn't exist, look for ways to create a path for the king.



White has the centralized king, but can't invade since Black's knight protects c5 and e5 and the e6-pawn protects d5.

White removes the knight to create an invasion path by playing **32.Bxd7**.

32...Rxd7 33.Kc5 h6 34.Kc6 Ra7 35.d7 Ra8 35...Ke7 36.Rxe6+! Kxe6 37.d8=Q promoting the pawn.
36.Kb7 Rf8 37.Kc7 Ke7 38.Rd1 Rd8 39.Rd6 White threatens **40.Rxe6+ Kxe6 41.Kxd8**. If Black's rook moves along the back rank, the d7 pawn promotes.



Position after 43...Kxa4 (p)
White to move

White's king is closer to the kingside pawns. White needs to create a path for the king to invade to win some pawns before Black's king returns to the kingside.

44.f5! Clearing f4 for the king. Black's king gets back in time to draw after 44.Kf3 Kb5 45.Ke4 Kc6 46.Ke5 Kd7 47.f5 Ke7 48.fxg6 Kd7.

44...Kb5 44...gxf5 45.Kf4 g6 46.Ke5 and White's king can win Black's pawns.

45.Kf4! 45.fxg6 Kc6 46.Kf4 Kd6 and Black's king arrives in time.

45...Kc6 45...gxf5 46.Kxf5 and Black's pawns will fall.

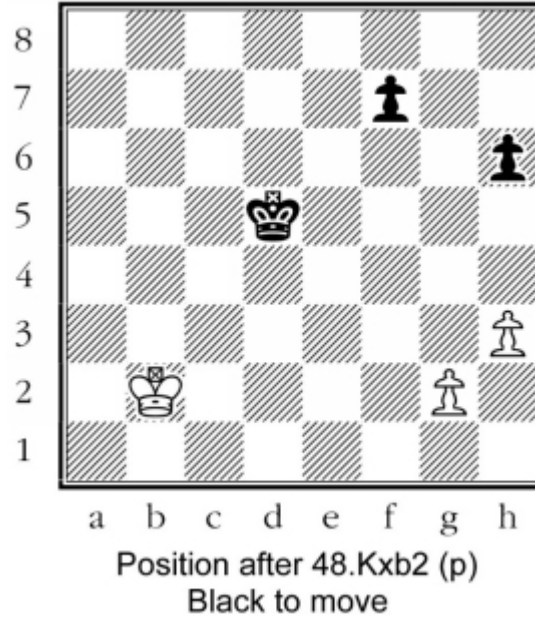
46.Ke5 Kd7 47.f6! Ke8 48.fxg7 Kf7 49.g8=Q+ Kxg8 50.Kf6 Kh7 White has the superior king position.

51.g4 g5 52.Kf7! h5 53.h4! gxh4 53...Kh6 54.Kf6 gxh4 55.g5+ is winning for White.

54.g5 h3 55.g6+ Kh6 56.g7 h2 57.g8=Q h1=Q 58.Qg7 mate.

Superior king position

The player whose king is closer to the action or the critical pawns usually wins the game.

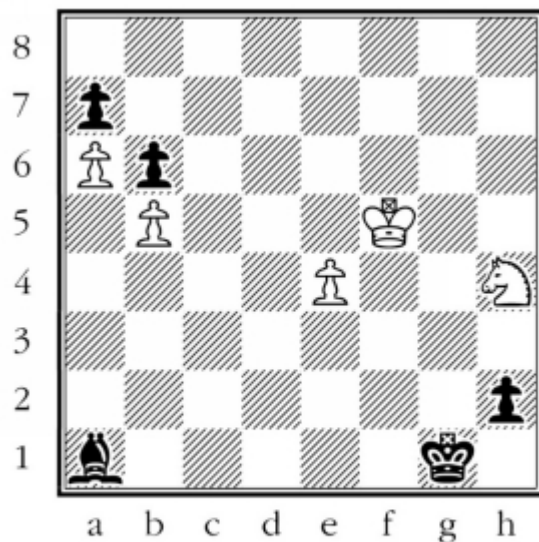


White's king is further from the kingside pawns.

Black wins with **48...Ke4**. 48...Ke5 and 48...Kd4 also win.

49.Kc3 Kf4 49...Ke3 also wins. 49...h5? allows White's king to reach the kingside in time and draw after 50.Kd2 Kf4 51.Ke2 Kg3 52.Kf1 f5 53.Kg1 f4 54.Kf1 f3 55.gxf3 Kxf3 56.Kg1 Kg3 57.h4 Kxh4 since Black's remaining pawn is a rook pawn.

50.Kd4 Kg3 51.Ke5 Kxg2 52.Kf6 Kxh3 53.Kxf7 h5 54.Kg6 Kg4 and the pawn can promote.



Position after 37...Kg1 (from h1)
White to move

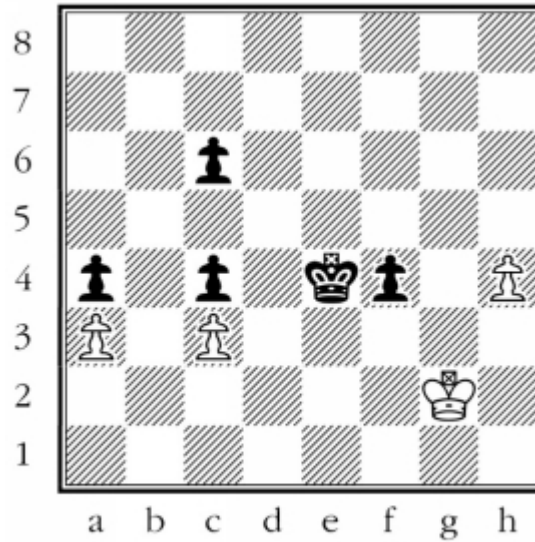
Black has an advanced outside passed pawn.
White's king is closer to the queenside.

38.Nf3+ White must sacrifice the knight for the passed pawn.

38...Kg2 39.Nxh2 Kxh2 40.e5! If White's king heads immediately for the a7 pawn, Black retreats the king diagonally and boxes in White's king after **40.Ke6 Kg3 41.Kd7 Kf4 42.Kc7 Ke5 43.Kb7 Kd6 44.Kxa7 Kc7** and White's king is trapped in front of the a6 pawn.

40...Bxe5 41.Kc6! White ignores the bishop that now blocks the diagonal path of Black's king on the way to c7.

41...Kg3 42.Kd7 Kf4 43.Kc8! **43.Kc6?** Bb8! **44.Kb7 Ke5 45.Kxb8 Kd6 46.Kxa7 Kc7** draws.
43...Ke4 44.Kb7 Kd5 45.Kxa7 Kc5 46.Kb7 and Black cannot stop the a-pawn from promoting.



Position after 62.h4
Black to move

Although White has the outside passed pawn, Black wins using the centralized king by playing **62...Kd3!** heading for the queenside pawns. 62...f3+? 63.Kf2 Kf4 64.h5 and the outside passed pawn wins for White.

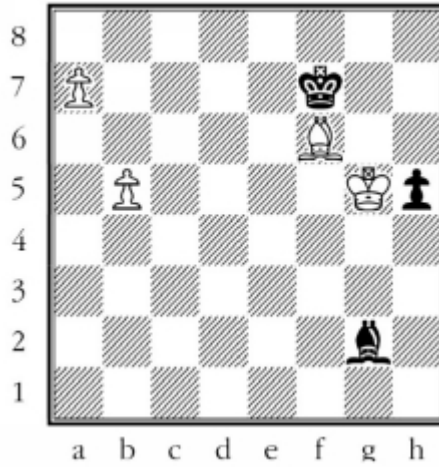
. **63.Kf3** 63.h5 Ke2 64.h6 f3+ 65.Kg3 (65.Kh2 f2 66.h7 f1=Q 67.h8=Q Qf4+ 68.Kg2 Qg4+ 69.Kh2 Kf3 threatening 70...Qg2 mate. 70.Qf6+ Qf4+ trading queens and winning the king and pawn endgame because Black's king is closer to the queenside pawns.) 65...f2 66.h7 f1=Q 67.h8=Q Qf3+ 68.Kh2 Kd2 and Black can win White's queenside pawns.

63...Kxc3 64.h5 Kb3 65.h6 c3 66.h7 c2 67.h8=Q c1=Q and Black is winning due to the extra pawns.

Basset Hound Problems



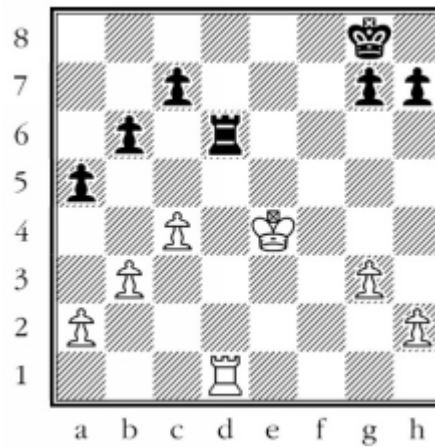
5-1



Position after 45...gxh5 (p)
What is White's best move?



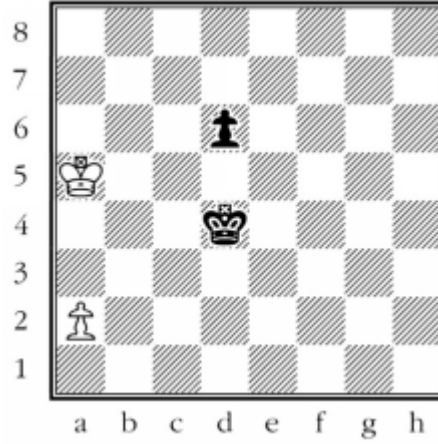
5-2



Position after 41...Rxd6 (R)
What is White's best move?



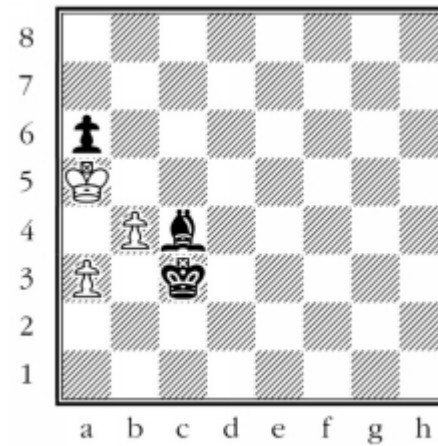
5-3



Position after 52.Kxa5 (p)
What is Black's best move?



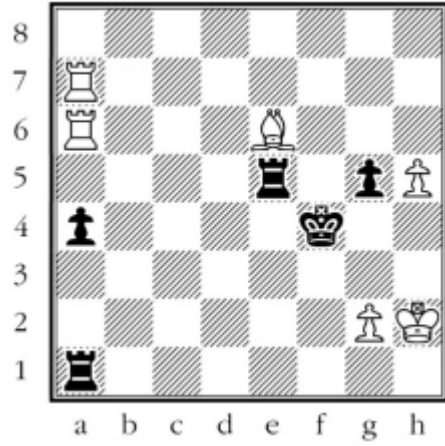
5-4



Position after 45.Ka5
What is Black's best move?



5-5



Position after 42.Rha7
How does Black force mate?



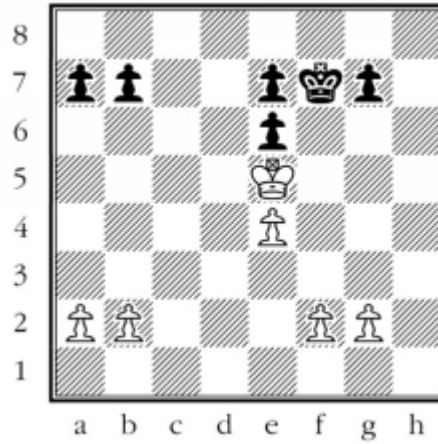
5-6



Position after 59...Qf7
How does White win the game?



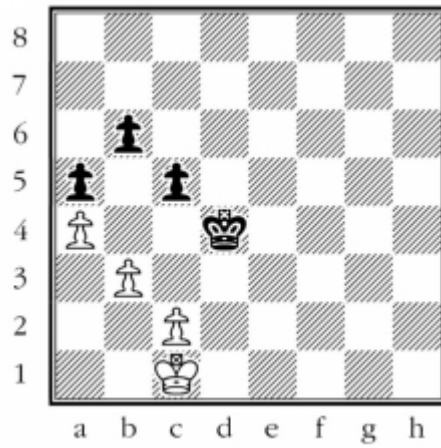
5-7



Position after 39...Kf7
 How does White win the game?



5-8



Position after 46.Kxc1 (R)
 How does Black win the game?



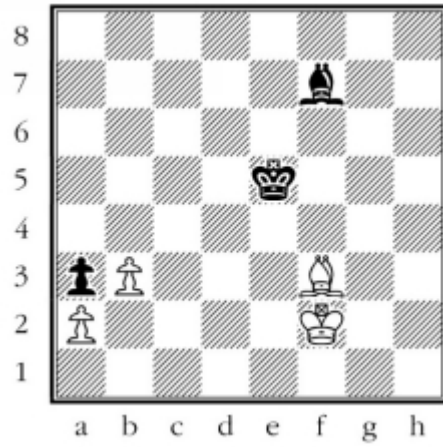
5-9



Position after 43...Kxc4 (p)
 How does White draw the game?



5-10

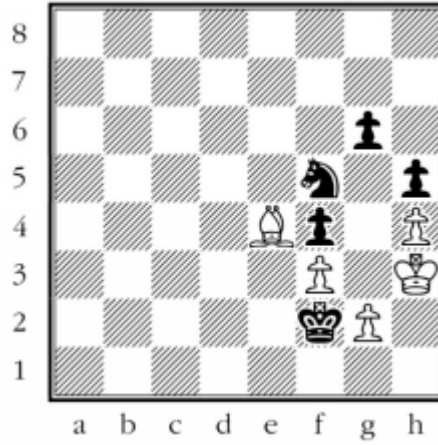


Position after 35.Kf2
 What is Black's best move?

Chess Detective Problems



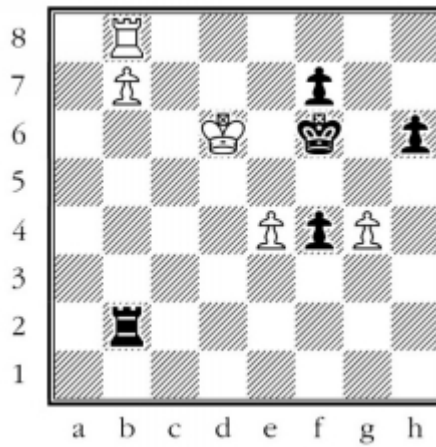
5-11



Position after 33.Be4
What is Black's best move?



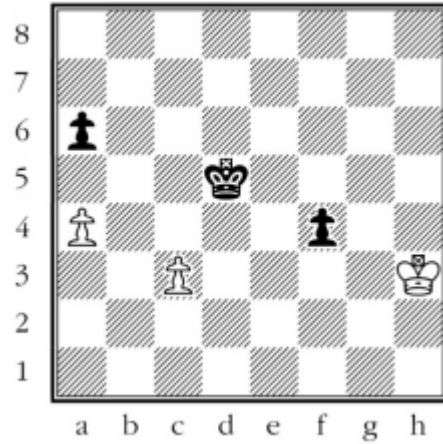
5-12



Position after 61...gxf4 (p)
What is White's best move?



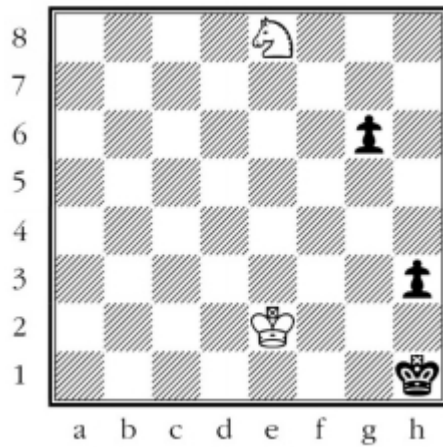
5-13



Position after 56.Kh3
How does Black win the game?



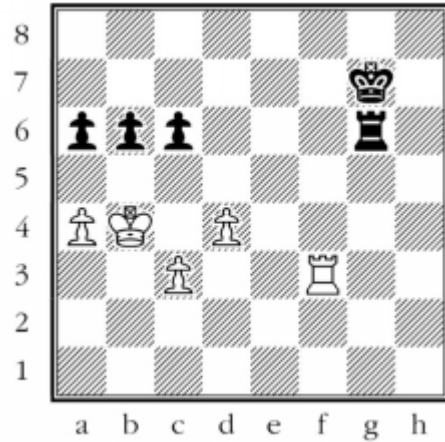
5-14



Position after 46...h3
How does White win the game?



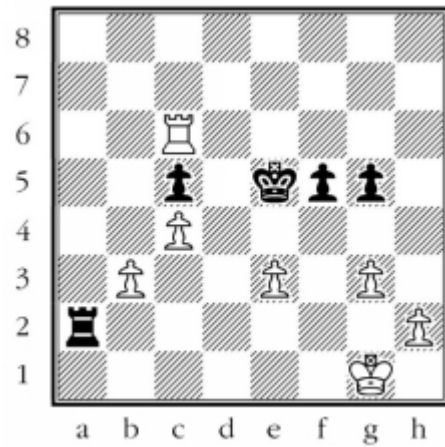
5-15



Position after 37...b6
 What is White's best move?



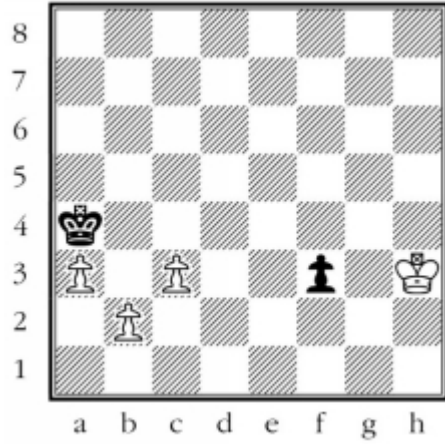
5-16



Position after 32.Rxc6 (p)
 What is Black's best move?



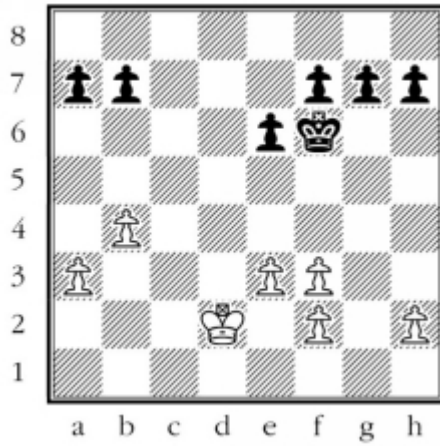
5-17



Position after 35.Kxh3 (p)
How does Black draw the game?



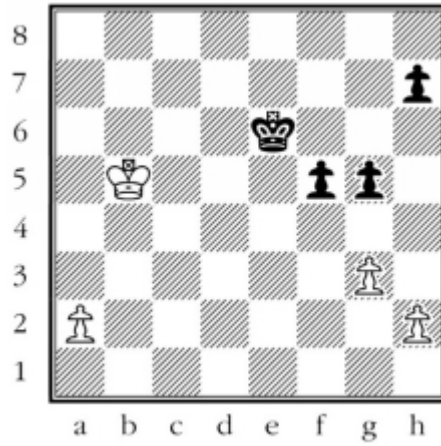
5-18



Position after 26.Kd2
How does Black win the game?



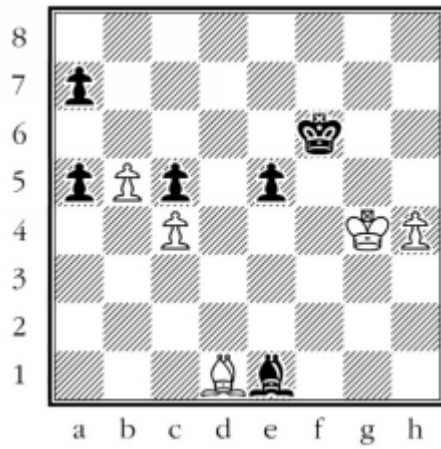
5-19



Position after 41.Kxb5 (N)
How does Black win the game?



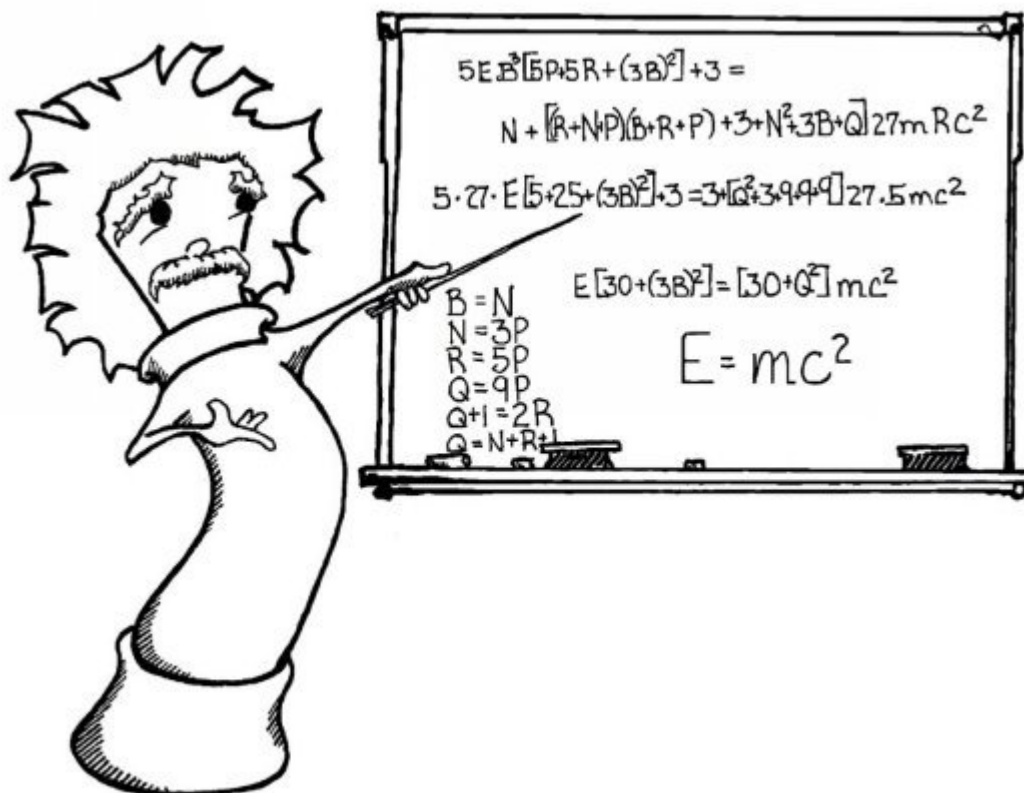
5-20



Position after 44.Kxg4 (p)
How does Black win the game?

LESSON 6

SIMPLIFYING TO A WINNING ENDING



*“Play the move that forces the win in the simplest way.
Leave the brilliancies to Alekhine, Keres and Tal.”*

Irving Chernev



The player ahead in material with the better position generally wants to simplify the position to an easier winning ending. The strong side can do this by trading or sometimes sacrificing material. The strong side usually wants to avoid trading pawns, which are potential queens in the future.

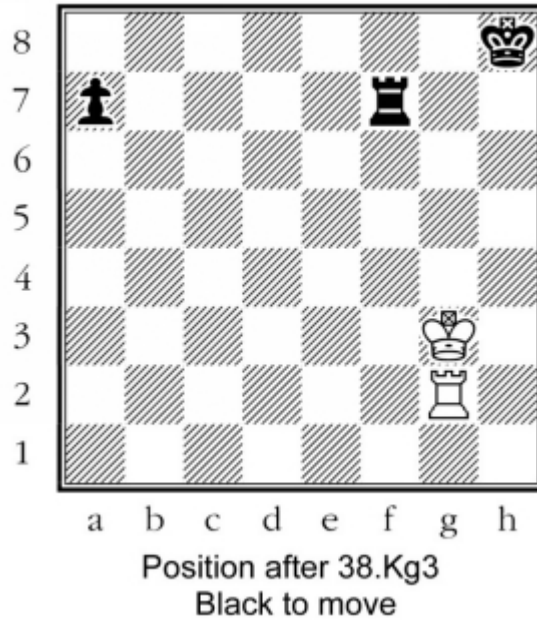
Trading pieces makes the position less complicated, reducing the chance of making a mistake.

The player who is behind in material, generally wants to trade pawns, not pieces, with the goal of eliminating all the opponent's pawns (future queens).

The weak side wants to keep more material on the board to create complications and make it more difficult for the opponent to win, but would be interested in trading material if a drawn position can be achieved.

Try to win weak pawns outright rather than trade for them. Trading pieces can be a good idea if a beneficial tactic can improve the position.

In the chess world, being able to finish off your opponent when you are ahead is referred to as having "good technique".



Black wins by trading rooks with **38...Rg7+**. **38...Kg8** keeps the position more complicated by leaving rooks on the board and giving White drawing chances.

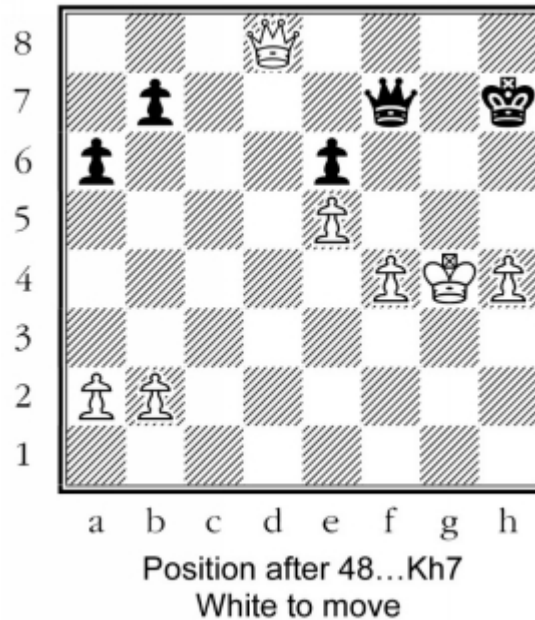
39.Kf3 Rxc2 40.Kxc2 White's king is forced to the g-file, outside the square of the a-pawn.

A pawn that hasn't moved can move two squares on its first move and shrink the square of the pawn by an extra square.

40...a5 41.Kf2 a4 White's king is too far away to catch the pawn.

In queen endings, trading queens simplifies the position for the player ahead in material.

With queens on the board, the weak side's queen should attempt to continuously check the king with the goal of forcing a threefold repetition draw.



White has two extra pawns and easily wins the king and pawn endgame if the queens are traded. Since Black is not interested in trading queens, White's queen can have her choice of squares and improve her position relative to Black's queen.

49.Qf6 Qg8+ Trading queens loses for Black after 49...Qxf6 50.exf6 Kg6 51.f7 Kxf7 52.Kg5 Kg7 53.h5 b6 54.h6+. White can sacrifice the outside passed h-pawn, move the king to f6, and then capture the e6 pawn.

50.Qg5 offering the queen trade again.

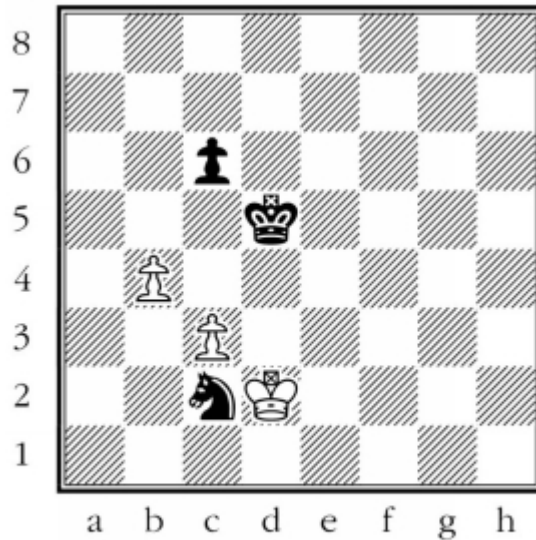
50...Qc8 51.Qe7+ Kh6 52.Qf6+ Kh7 53.Qf7+ Kh6 53...Kh8 54.Kg5 threatening 55.Kh6 followed by mate on g7 or h7. 54...Qd8+ 55.Qf6+ forces a queen trade.

54.h5 Qc2 55.Qg6+ forcing a queen trade. 55.Qxe6+ also wins.

55...Qxg6 56.hxg6 Kxg6 57.f5+ exf5+ 58.Kf4 Black will be in zugzwang and have to abandon the f5 pawn after running out of pawn moves on the queenside.

58...b6 59.a3 b5 59...a5 60.a4 locks up the queenside pawns.

60.b4 Kf7 61.Kxf5 White has a winning king and pawn endgame.



Position after 51.Kd2
Black to move

Black is ahead a knight to a pawn, but must retain the c6 pawn in order to win.
When a player has a superior position there are often several winning variations.

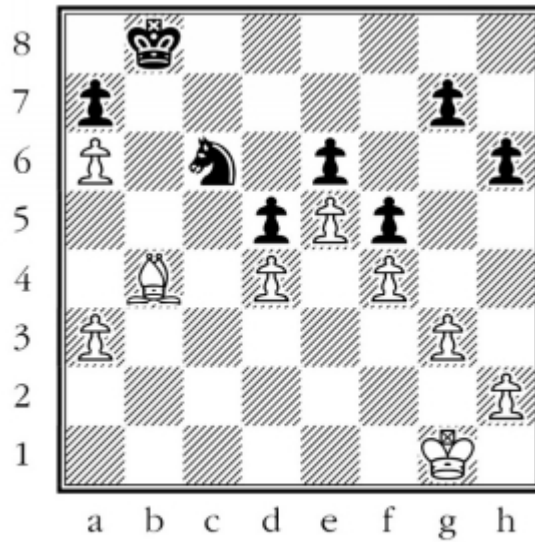
51...Nxb4 Trading down to a winning king and pawn ending is the simplest path to victory.

51...Na3 52.Kd3 Nc4 53.Kc2 Ke4 54.Kb3 Kd3 keeping the knight also wins.

Sacrificing the knight with 51...Nd4 52.cxd4 Kxd4 53.Kc2 Kc4 54.Kc1 (54.b5 cxb5 is winning, not 54...Kxb5? 55.Kb3 giving White the opposition.) 54...Kxb4 55.Kb2 c5 with the opposition also wins for Black.

Black can also play 51...Na1 52.Kd3 Nb3 53.c4+ Ke5. If White plays 54.b5, Black can respond 54...c5, retaining the pawn. Black can win White's pawns with the king and extra knight.

52.cxb4 Kc4 53.b5 Kxb5 53...cxb5? 54.Kc2 with the opposition. **54.Kc3 Kc5** with the opposition and a winning king and pawn ending.



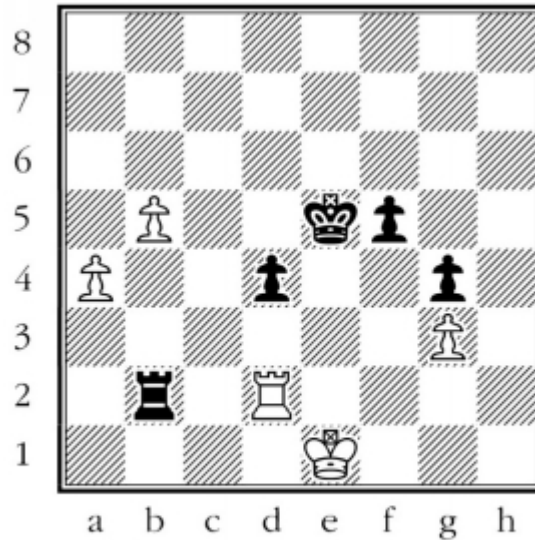
Position after 38.Bb4
Black to move

White is ahead a pawn in material.

Since Black's king is close to White's vulnerable queenside pawns, Black wins the king and pawn ending by trading minor pieces with **38...Nxb4!** 38...Nxd4 gives Black a smaller advantage.

39.axb4 Kc7 40.Kf2 Kb6 41.Ke3 Kb5 41...Kxa6 42.Kd3 Kb5 43.Kc3 Ka4 outflanking White and winning the b-pawn also gives Black a winning position.

42.Kd3 Kxb4 43.Kd2 Kc4 44.Ke3 Kc3 45.Ke2 Kxd4 winning the d4 pawn and the game.



Position after 51.Rd2
Black to move

White has two connected outside passed pawns and offers a rook trade to get the king off the first rank.

51...Rxd2 Black accepts the offer since it gives him a winning king and pawn ending.

52.Kxd2 f4! creating a second passed pawn.

53.gxf4+ Kd6! From d6, Black's king can retreat to c7 in time to stop White's queenside passed pawns. 53... Kxf4? 54.b6 g3 55.b7 g2 56.b8=Q+ wins for White.

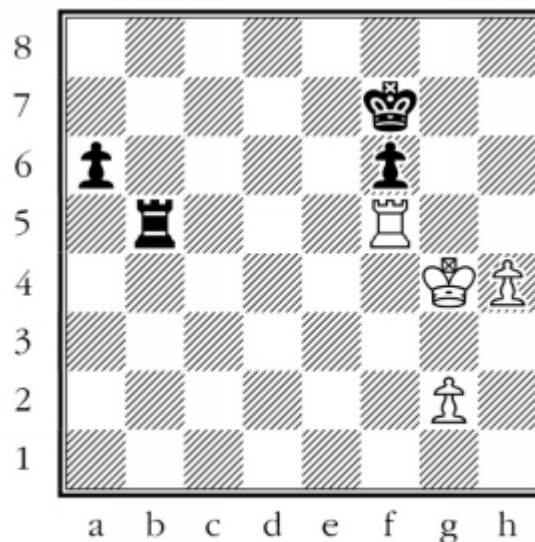
54.a5 g3 Black's passed pawns are a step closer to their promotion squares than White's.

55.a6 Kc7 staying in the square of White's a6 pawn.

56.Ke2 d3+ White can't stop both passed pawns.

57.Kxd3 g2 58.Ke4 g1=Q 59.Kf5 Qb6 60.Kg5 Kd7 Black's king heads to the kingside to stop the f-pawn. Black has other winning moves as well.

61.f5 Ke7 White is lost since Black's king can block the f-pawn and queen can win White's queenside pawns.



Position after 37.Kg4
Black to move

Material is even. White offers a rook trade to improve the king position.

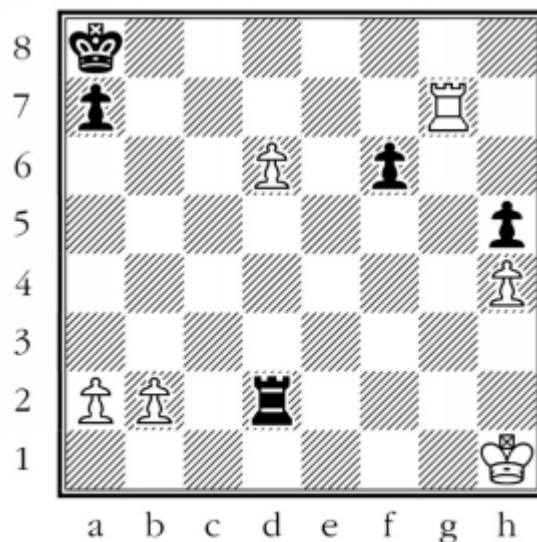
37...Rxf5! Black can accept the offer because he has a winning king and pawn endgame due to the outside passed a-pawn.

38.Kxf5 a5 39.Ke4 f5+! 40.Kd4 40.Kxf5 a4 and Black's a-pawn will promote.

40...f4! The point of 39...f5+. White cannot safely move the pawn to g3. 40...a4? 41.g3! and once Black's king arrives on g4 he would leave the square of the h-pawn in order to capture the g3 pawn.

41.Kc4 Kg6 Black's king can capture White's pawns and then help the f-pawn promote.

42.Kb5 Kh5 43.Kxa5 Kxh4 44.Kb4 Kg3 45.Kc3 Kxg2 Black's king is in position to escort the f-pawn to f1.



Position after 45...Rd2
White to move

Both kings are trapped on their back ranks.

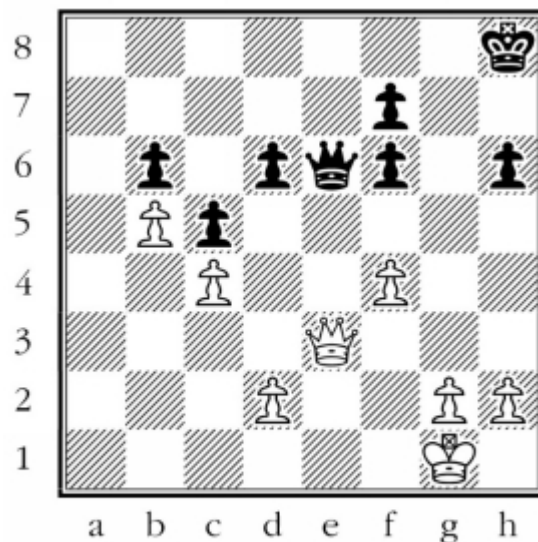
46.d7! 46.Rh7 Rxd6 47.Rxh5 Rd1+ 48.Kg2 Rd2+ 49.Kg3 Rxb2 gives White an advantage in the rook and pawn endgame, but is more complicated since the rooks are still on the board.

46...Kb8 Black's king heads toward White's d-pawn.

47.Rg8+ Kc7 48.d8=Q+! Rxd8 49.Rxd8 Kxd8 50.Kg2 White has a winning pawn majority on the queenside.

50...Ke7 51.Kf3 Ke6 If Black's king heads to the queenside to capture White's pawns, White can win Black's kingside pawns and then race to promote the h-pawn before Black promotes the a-pawn.

52.Kf4 a5 53.b3 moving the unopposed pawn first. White can then play 54.a3 and 55.b4 to create a winning outside passed pawn on the queenside.



Position after 36...Qe6
White to move

Even though it straightens out Black's doubled isolated f-pawns, White correctly trades queens to go into a winning king and pawn ending by playing **37.Qxe6**.

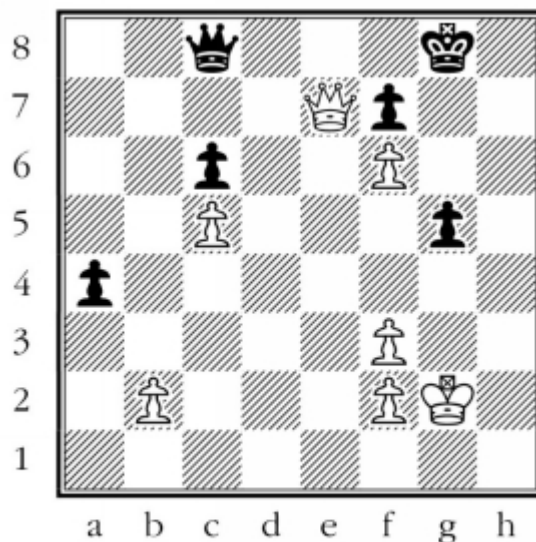
37...fxe6 38.f5! creating paths for White's king to invade.

38...Kg7 38...e5 39.Kf2 Kg7 40.Ke3 Kf7 41.Ke4 Ke7 42.Kd5 Kd7 43.g4 and Black is in zugzwang.

White also wins after **38...exf5 39.Kf2 Kg7 40.Ke3 Kf7 41.Kf4 Ke6 42.d3 d5 43.h3 d4 44.g3 h5 45.h4**. Black is in zugzwang and will lose the f5 pawn after the king retreats. White can then either play g4 at the right time to create an outside passed h-pawn or move the king to the queenside to win the b6 pawn, depending on Black's response.

39.Kf2 Kf7 40.Kf3 Ke7 40...d5 41.d4! cxd4 42.c5 bxc5 43.b6 and Black's king is outside the square of White's b-pawn.

41.Ke4 h5 42.h4 Kf7 43.fxe6+ Kxe6 44.Kf4 d5 45.d3 d4 46.Ke4 f5+ 47.Kf4 Kf6 48.g3 It is important to have an extra pawn tempo. Black is in zugzwang. After Black's king moves, White's king can invade and win the king and pawn endgame.



Position after 40...hxg5 (p)
White to move

White is a pawn ahead with the more aggressively placed queen.

41.Qe3 41.Qe5 also wins the g5 pawn.

41...Qe6 offering to trade queens. 41...Qf5 42.Qe8+ Kh7 43.Qxf7+ is winning for White.

42.Qxg5+ White wins the g5 pawn before seeking a queen trade. Trading queens with 42.Qxe6? fxe6 43.Kg3 Kf7 results in an equal position.

42...Kf8 42...Kh7 43.Qg7 mate.

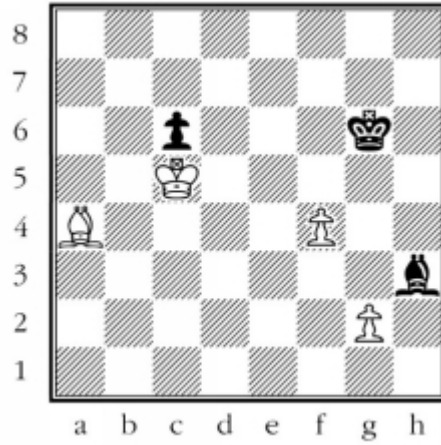
43.Qg7+ Ke8 44.Qg8+ Kd7 45.Qg4 White is now willing to trade queens, especially if it improves the resulting pawn structure.

45...Ke8 46.Qxe6+ fxe6 47.Kg3 Kf7 48.Kf4 Kxf6 49.Ke4 e5 50.f4 exf4 51.Kxf4 giving White a winning king and pawn ending with the extra f-pawn.

Basset Hound Problems



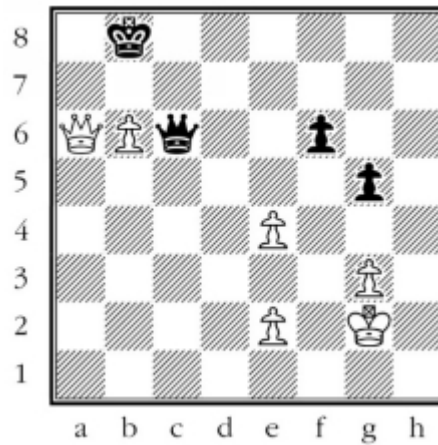
6-1



Position after 45...Bxh3 (p)
What is White's best move?



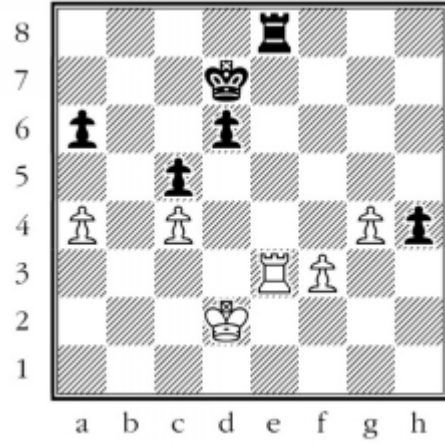
6-2



Position after 45...Qc6
What is White's simplest win?



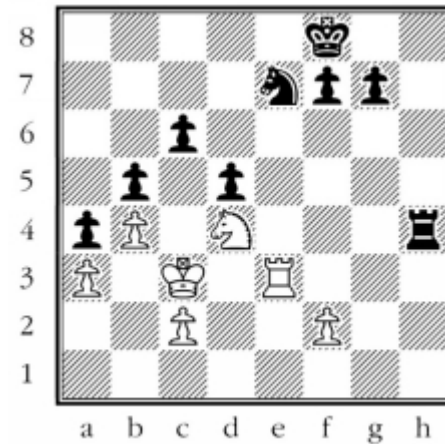
6-3



Position after 37.Kd2
What is Black's best move?



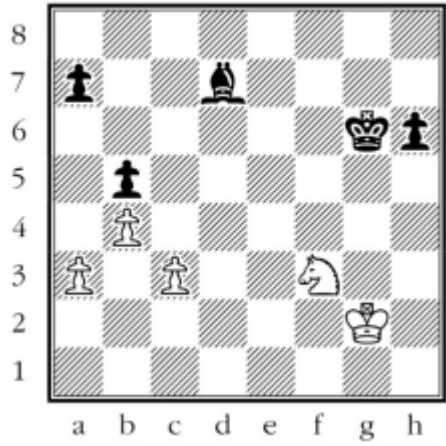
6-4



Position after 37.Nd4
What is Black's best move?



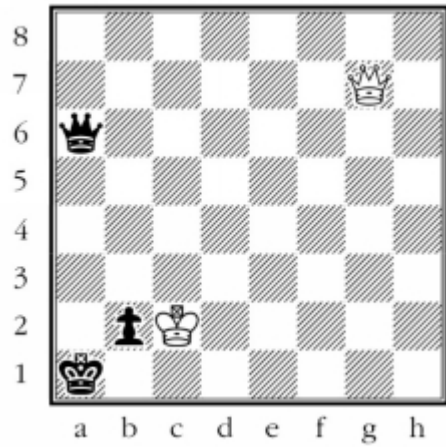
6-5



Position after 44.Nf3
What is Black's best move?



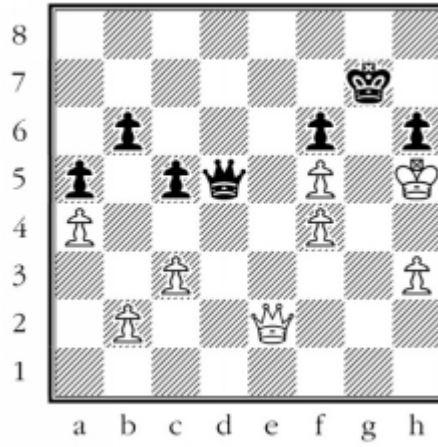
6-6



Position after 47.Kc2
What is Black's best move?



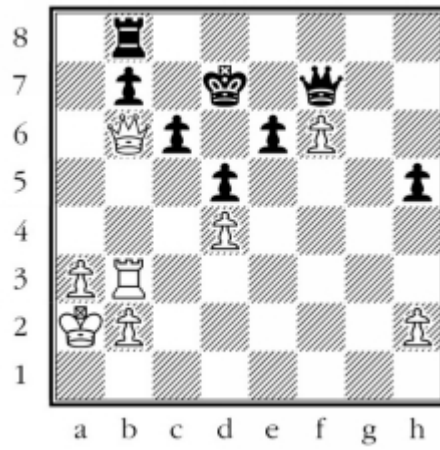
6-7



Position after 57...Qd5
How does White win the game?



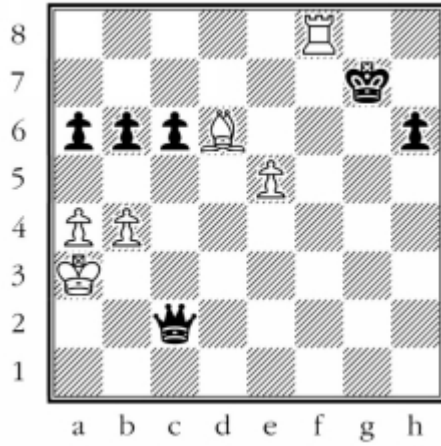
6-8



Position after 43...Kd7
What is White's best move?



6-9



Position after 57.Ka3
 How does Black simplify the position?



6-10



Position after 49...Qf6
 What is White's best move?

Chess Detective Problems



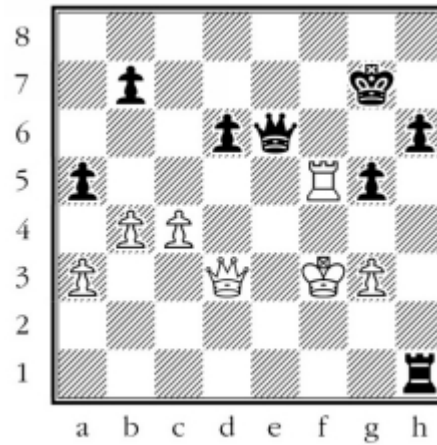
6-11



Position after 46...Rxe6 (p)
What is White's best move?



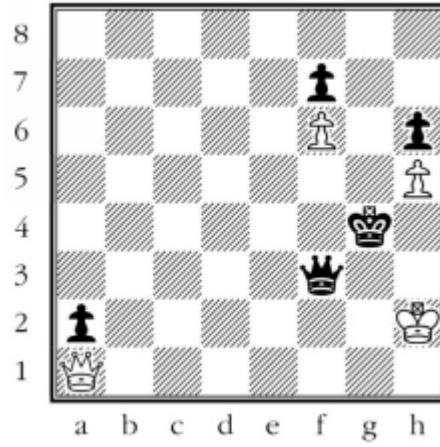
6-12



Position after 37.Kf3
What is Black's best move?



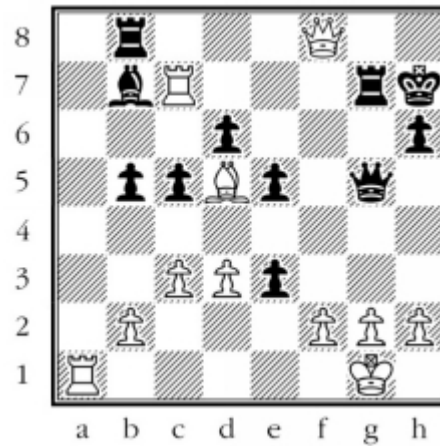
6-13



Position after 55.Qa1
What is Black's simplest win?



6-14



Position after 29...Bb7
What is White's best move?



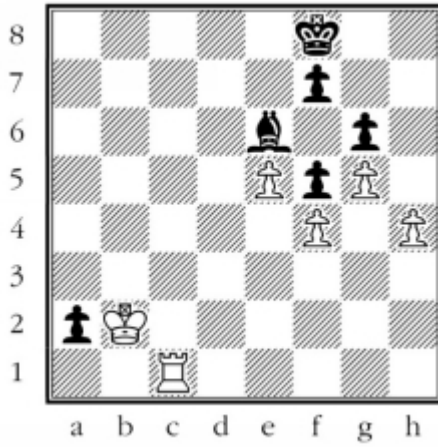
6-15



Position after 54...Qe2
 What is White's best move?



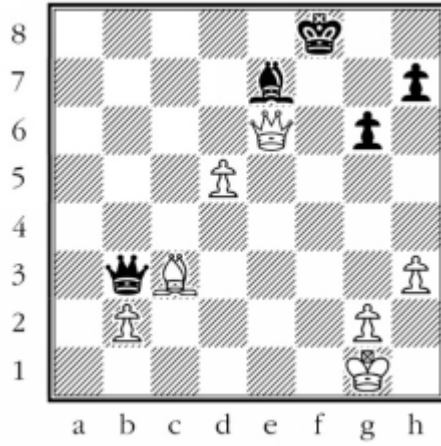
6-16



Position after 41...Kf8
 How does White win the game?



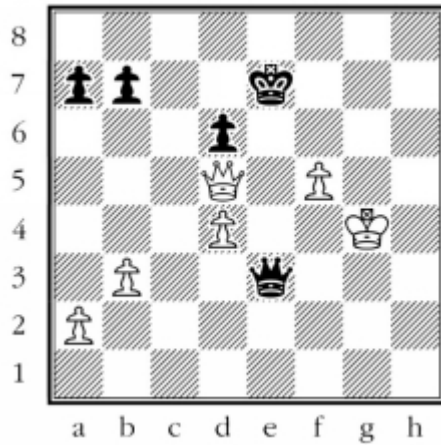
6-17



Position after 41...Kf8
What is White's best move?



6-18



Position after 53...Ke7
What is White's best move?



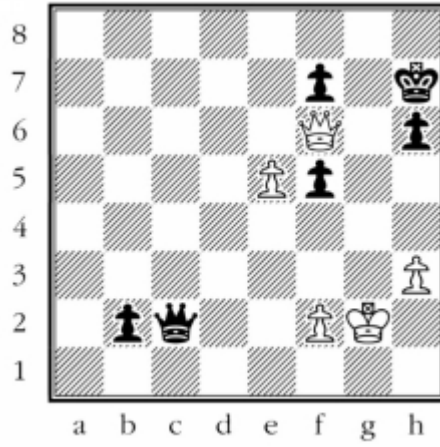
6-19



Position after 38.Red2
 What is Black's best move?



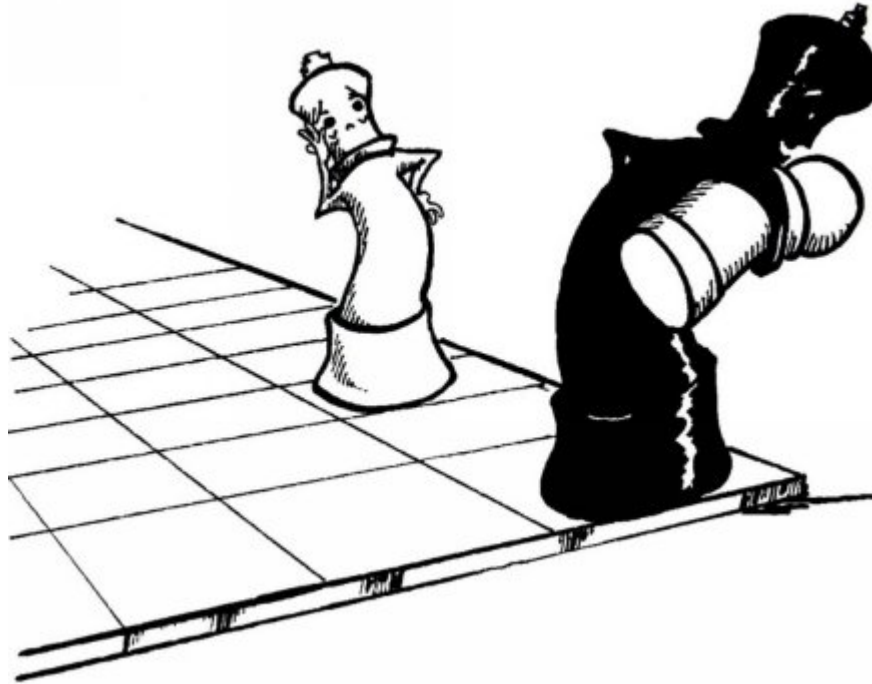
6-20



Position after 57.Qf6
 What is Black's best move?

LESSON 7

SALVAGING A DRAW



*“If your opponent offers you a draw,
try to work out why he thinks he’s worse off.”*

Nigel Short



When your position is worse and it looks like the game will end in defeat, look for ways to salvage a draw. When you are losing, any type of draw is good.

It is important to be mentally tough and dig in when presented with adversity.

As long as you are still playing, there is a chance your opponent will make a mistake; hang in tough and try to complicate the position, sometimes the tide will turn.

In this lesson we will examine the different types of draws you may be able to steer the game into: insufficient mating material, stalemate, threefold repetition (typically perpetual check), and setting up a fortress position where your opponent can't make enough progress to win.

Insufficient mating material draws can be achieved by eliminating your opponent's last pawn, leaving only a king or king and minor piece.

Stalemate can be forced if you can trade your remaining pieces that can move, leaving your king in a position where he has no legal moves.

Threefold repetition draws occur when the weak side forces the same position to repeat continuously. Perpetual check is a common type of threefold repetition where the player who is behind can force an unending series of checks that the opponent's king cannot escape.

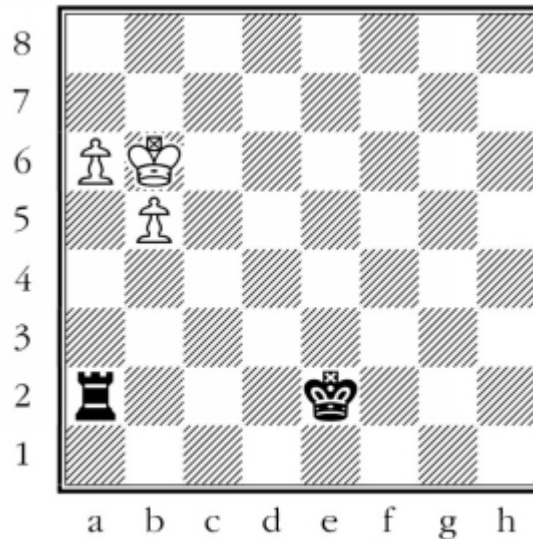
When the weak side is able to prevent the opponent from making progress toward checkmate or promoting a pawn, or can create a fortress that cannot be penetrated, the players often agree to a draw.

Often several drawing methods are present in the same position.

Consider the first example we discussed in the "Rook pawns" section in Lesson 1 where White has a pawn on h6 and king on g6 with Black's king on h8. If White doesn't advance the pawn to h7, no progress is made and Black will soon claim a threefold repetition draw. If the pawn advances, it would be stalemate. In positions with Black's king on g8 and White's pawn advancing to h7 with check, after Black's king moves to h8, White's king would have to abandon the pawn to avoid stalemate, resulting in a draw by insufficient mating material.

Draw by insufficient mating material

Draw by insufficient mating material is a common type of draw which occurs when most of the material trades off, leaving both players with only a king or one player with a king and the other with a king and a minor piece. The player ahead by a minor piece needs to keep at least one pawn in order to have the ability to win.



Position after 41.a6
Black to move

Here is an example of a draw by insufficient mating material when White had to sacrifice a rook to prevent one of Black's advanced passed pawns from promoting.

Black's king needs to quickly return to his side of the board in an attempt to stop White's passed pawns.

41...Kd3 42.Kb7 Kc4 43.b6 Kb5 attacking the a6 pawn a second time.

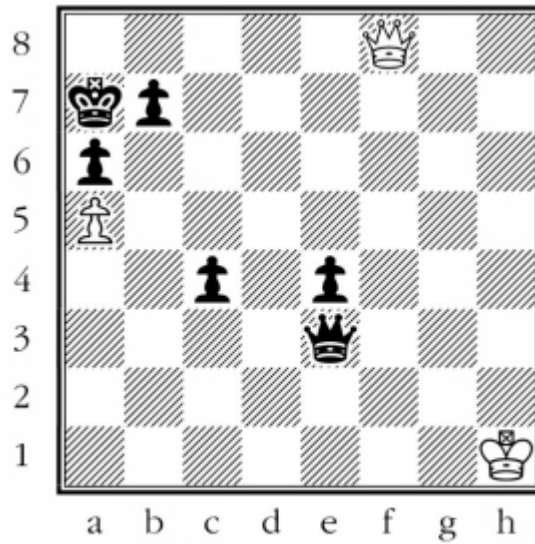
44.a7 Ra1 Black plays a waiting move since the king can't retreat any further.

45.a8=Q 45.Kc7 Ra2 46.a8=Q Rxa8 47.b7 Ra7 48.Kc8 Rxb7. Black can't allow White to promote the pawn.

49.Kxb7 with a draw by insufficient mating material.

45...Rxa8 46.Kxa8 Kxb6 with a draw by insufficient mating material.

Stalemate



Position after 91...Qe3

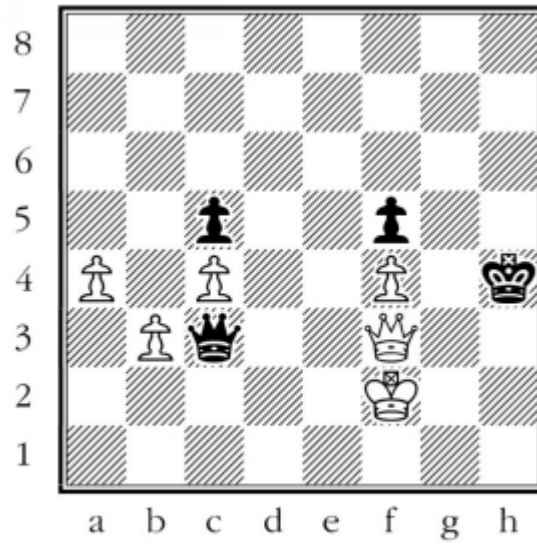
White to move

Black is ahead three pawns in material.

White notices that Black's king and queen are on the same diagonal.

White saves the game by pinning Black's queen to the king with **92.Qf2!**

Black will lose the queen and the game if he doesn't play **92...Qxf2 stalemate**.

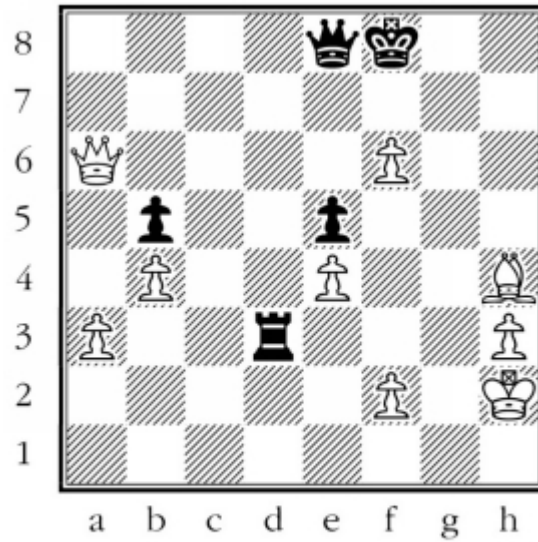


Position after 86.Qf3
Black to move

Black is behind two pawns in material and would be happy with a draw.

Notice that Black's king has no legal moves as long as White's queen is on f3.

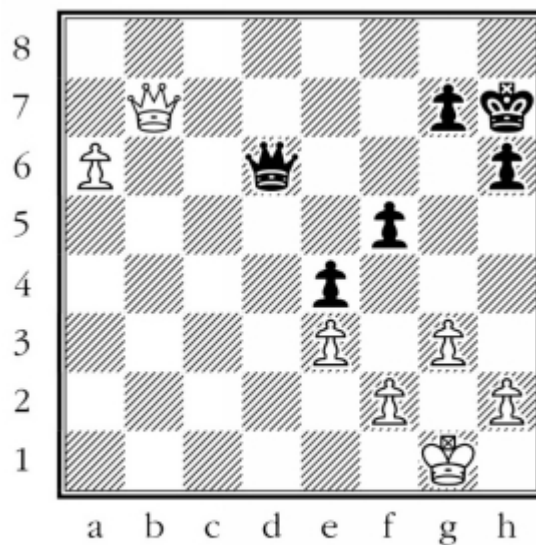
Black can force White's king to capture Black's queen by playing **86...Qe1+!** **87.Kg2 Qg1+** **88.Kxg1 stalemate.**



Position after 57.Qxa6 (p)
Black to move

White appears to have a winning position since he is ahead four pawns to the exchange.
 Black can force a draw by sacrificing both the rook and queen starting with **57...Rxf3!**
58.Kxf3 58.Kg2 Rxf4 leaves Black ahead in material.
58...Qe6+! forking White's king and queen.
59.Qxe6 stalemate.

Threefold repetition

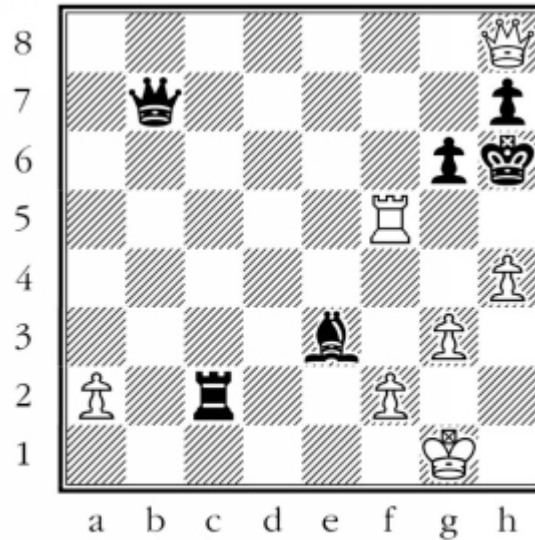


Position after 55.a6
Black to move

White's queen is supporting the passed a-pawn, but is too far away to protect her king.

Black draws by threefold repetition with a perpetual check by playing **55...Qd1+**.

56.Kg2 Qf3+ 57.Kf1 Qd1+ 58.Kg2 Qf3+ 59.Kh3 Qg4+ 60.Kg2 Qf3+ Since White's king cannot escape the annoying checks, the game is drawn.



Position after 42...Kh6
White to move

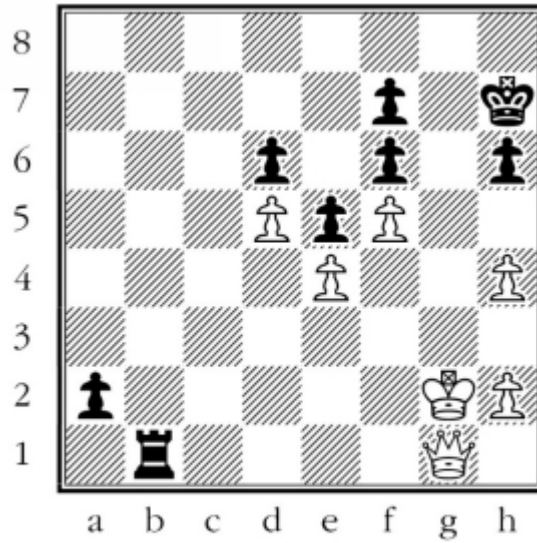
Black is ahead a bishop to two pawns in material, with both players attacking the opponent's exposed king.

White needs to continuously check Black's king so he won't get checkmated or lose the endgame.

43.Qf8+ Losing is 43.Rh5+ (43.fxe3? Qg2 mate) 43...Kxh5 (43...gxh5? 44.Qf6 mate) 44.Qe5+ Kh6 45.Qxe3+ Kg7 46.Qe5+ Kf7 47.Qf4+ Kg8. White's queen has run out of safe checks with Black ahead a rook to a couple pawns.

43...Qg7 44.Rh5+! gxh5 44...Kxh5 loses the queen to 45.Qxg7.

45.Qd6+ Qg6 46.Qf8+ Qg7 47.Qd6+ Qg6 48.Qf8+ Qg7 49.Qd6+ White draws by threefold repetition.

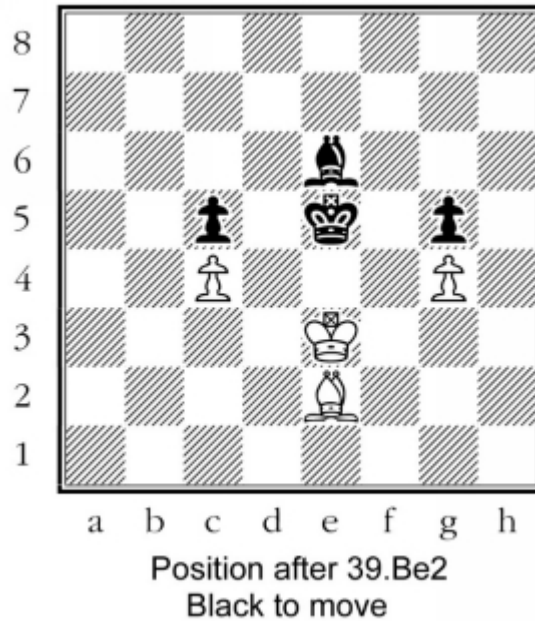


Position after 38...Rb1
White to move

Black threatens to safely promote the a2 pawn, resulting in a rook advantage with a winning attack.
 White saves the game with **39.Qa7!**
39...a1=Q promoting the pawn. **39...Rb2+** **40.Kg3** gives White the advantage.
40.Qxf7+ Black's queen and rook are too far away to protect the king.
40...Kh8 41.Qf8+ Kh7 42.Qf7+ Black's king cannot escape the checks and the game will be drawn by
 threefold repetition.

Lack of progress

If the player with the advantage hopes to win the game, progress must be made toward achieving a winning position. Once progress stops, the game is drawn.

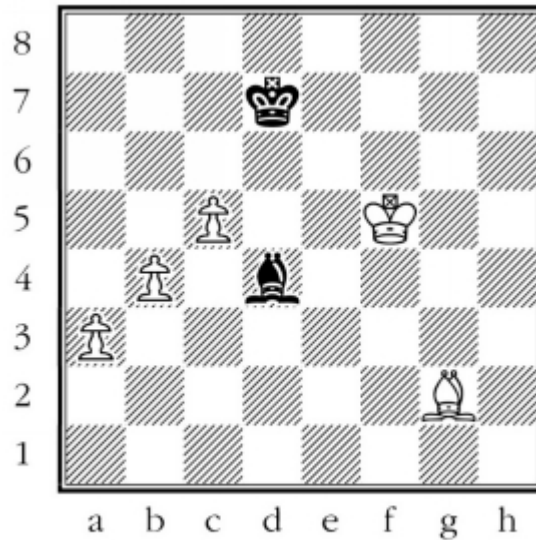


Black has winning chances because of the more advanced king and White's pawns blocked on the color of the bishops.

39...Bf7 40.Bf1 White's bishop has enough available squares on the f1-a6 and d1-h5 diagonals to prevent Black's bishop from outmaneuvering him and putting him in zugzwang.

40...Bg8 41.Bd3 41.Be2? loses to 41...Be6 putting White in zugzwang.

41...Be6 42.Be2 The game is drawn since Black can't make progress.



Position after 35.Kf5
Black to move

White has three dangerous connected passed pawns in this position with opposite-colored bishops. Black needs to blockade White's pawns on the dark squares with both the king and bishop to prevent them from promoting.

35...Bb2! forcing the a-pawn to move forward to a light square.

36.a4 Ba3 36...Bc3 37.b5 Bb4 38.c6+ Kc7 transposes to the main line below.

37.c6+ Kc7 38.b5 Bb4! preventing 39.a5.

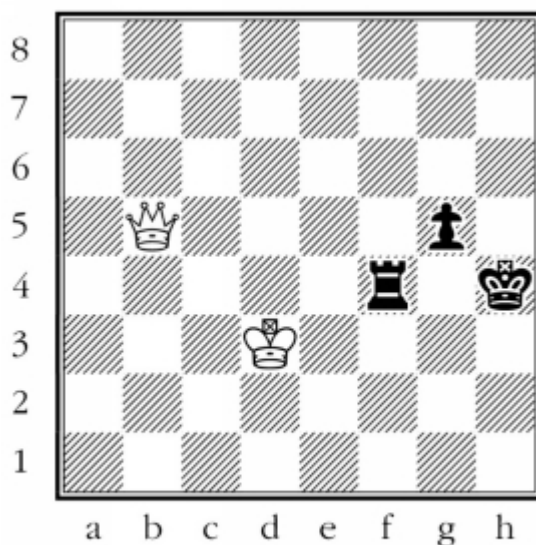
39.Ke6 Bd2 40.Kd5 Be1 41.Kc5 Bf2+ 41...Ba5? 42.Be4 puts Black in zugzwang. 42...Bb6+ 43.Kb4 followed by 44.a5 and the pawns can safely advance.

42.Kb4 Be1+ 43.Kc4 Bd2 The game is drawn since White cannot make progress by safely advancing the pawns.

We will take a closer look at opposite color bishop endings in Lesson 8.

Fortress position

A fortress position is a defense set up by the weak side that prevents the strong side from making progress to force a winning position.



Position after 53...Kh4
White to move

Black built a fortress position. The king protects the pawn, which in turn protects the rook.

54.Ke3 moving closer to Black's king.

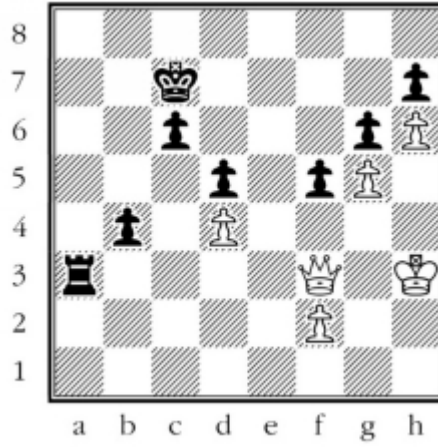
54...Kg4 Black has no reason to move the rook which prevents White's king from getting closer to the kingside. Moving the rook to a square where it isn't protected invites the queen to fork the king and rook.

55.Qd7+ Kh5 56.Qh7+ Kg4 57.Qh6 Kf5 58.Qh3+ Kg6 Since White cannot pry Black's king away from the g-pawn to make progress, Black salvages a draw.

Basset Hound Problems



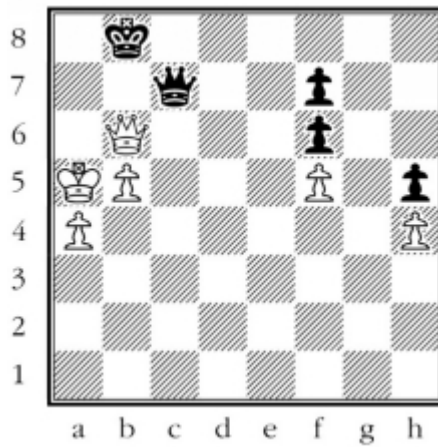
7-1



Position after 77...Ra3
What is White's best move?



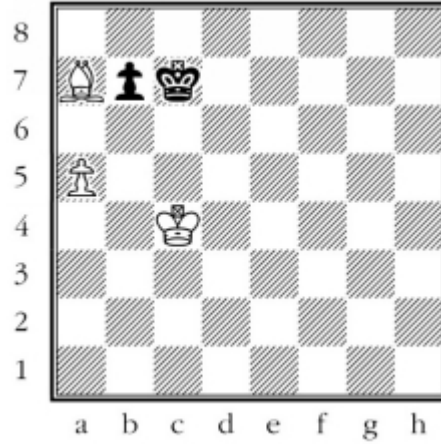
7-2



Position after 45.Qb6+
What is Black's best move?



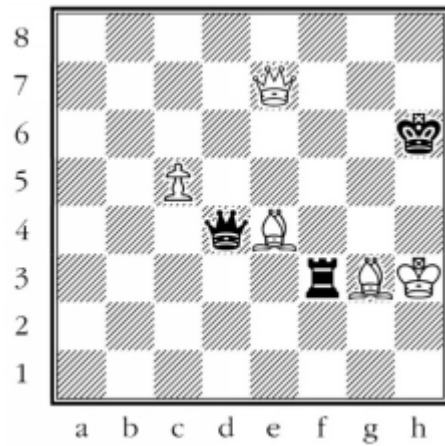
7-3



Position after 44.a5
What is Black's best move?



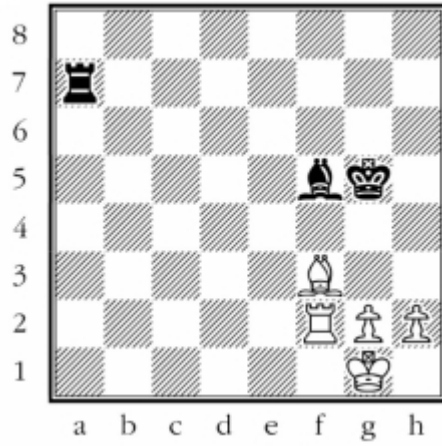
7-4



Position after 54.Bxe4 (p)
How does Black draw the game?



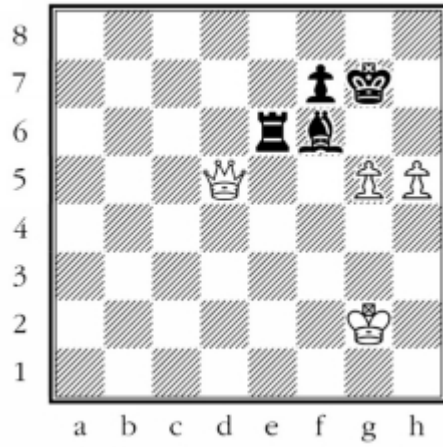
7-5



Position after 38.Bf3
How does Black achieve a draw?



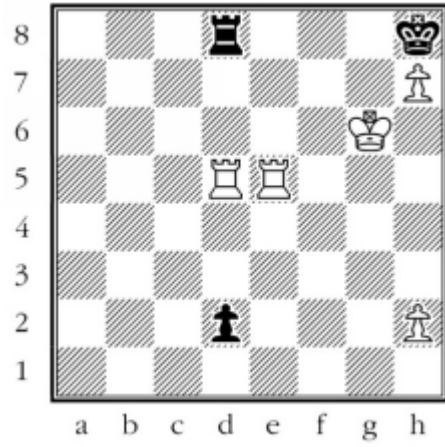
7-6



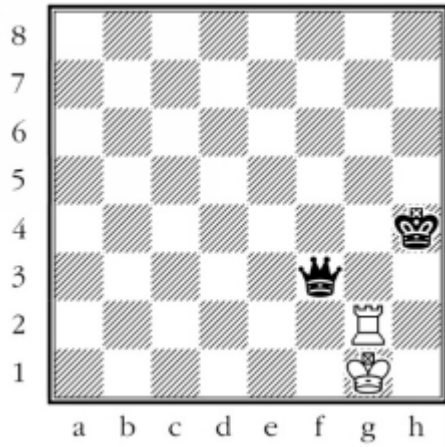
Position after 59.fxg5 (p)
How does Black draw the game?



7-7

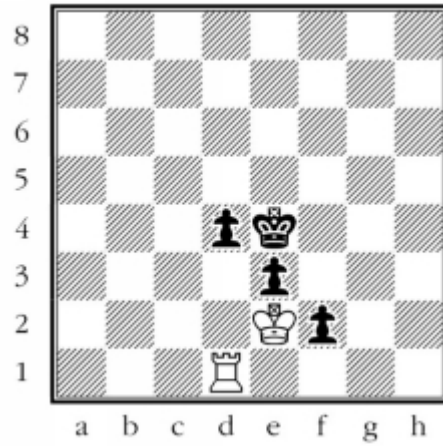


Position after 52.Rbd5
How does Black draw the game?



Position after 58...Kh4
How does White draw the game?

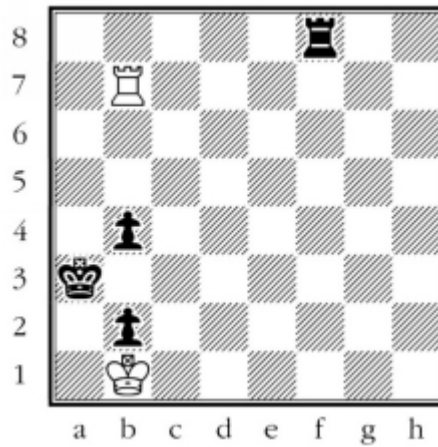




Position after 42...Ke4
 What is White's best move?



7-10

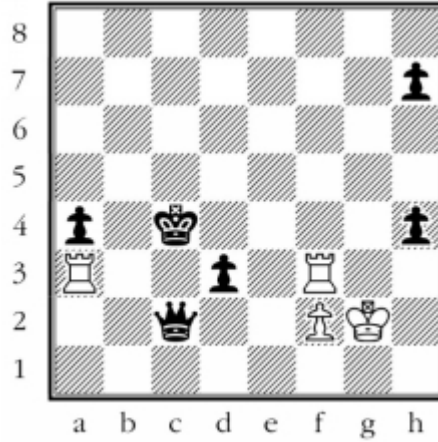


Position after 44...Rxf8 (R)
 How does White draw the game?

Chess Detective Problems



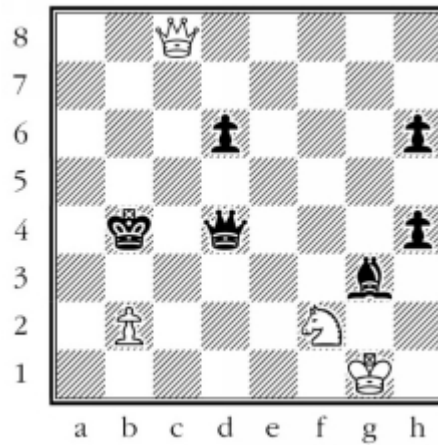
7-11



Position after 57...d3
What is White's best move?



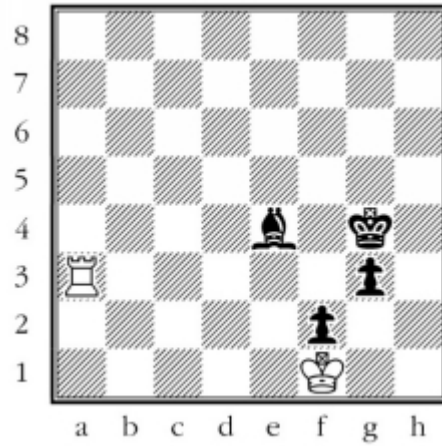
7-12



Position after 51...Kb4
What is White's best move?



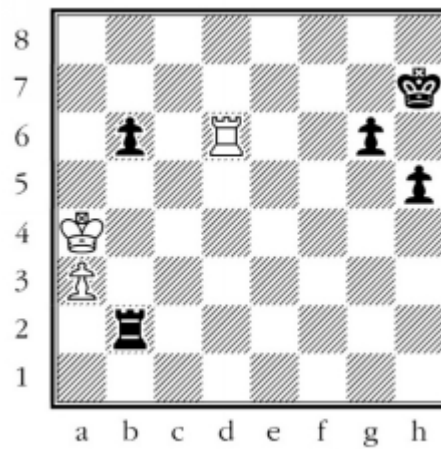
7-13



Position after 67...Kg4
What is White's best move?



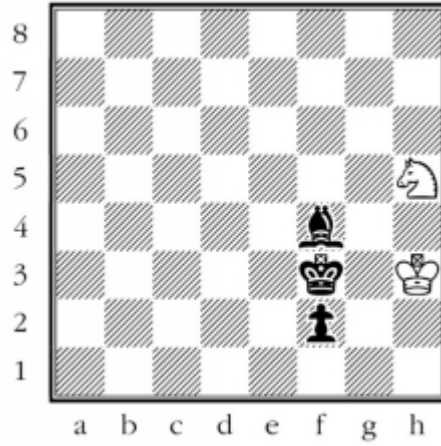
7-14



Position after 59...Rxb2 (p)
How does White force a draw?



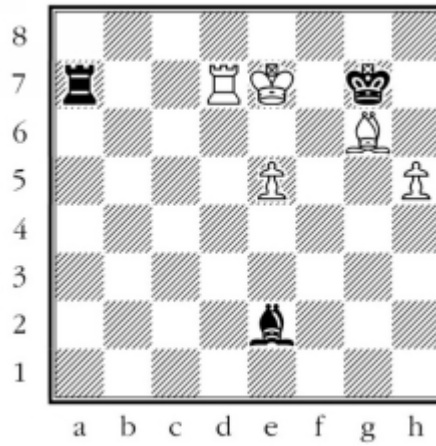
7-15



Position after 41...Bxf4 (B)
 How does White draw the game?



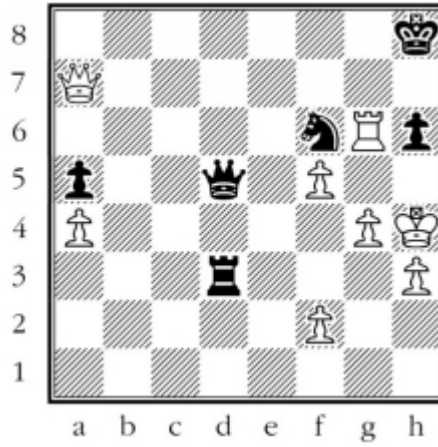
7-16



Position after 34.Rd7
 What is Black's best move?



7-17



Position after 41.Kh4
What is Black's best move?



7-18



Position after 32.Qxb8 (R)
How does Black draw the game?



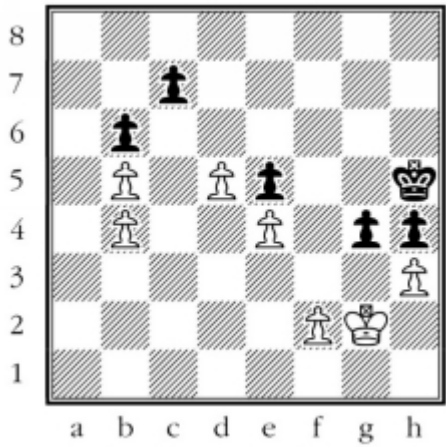
7-19



Position after 45...a2
What is White's best move?



7-20



Position after 38...g4
What is White's best move?

PIECE ENDINGS

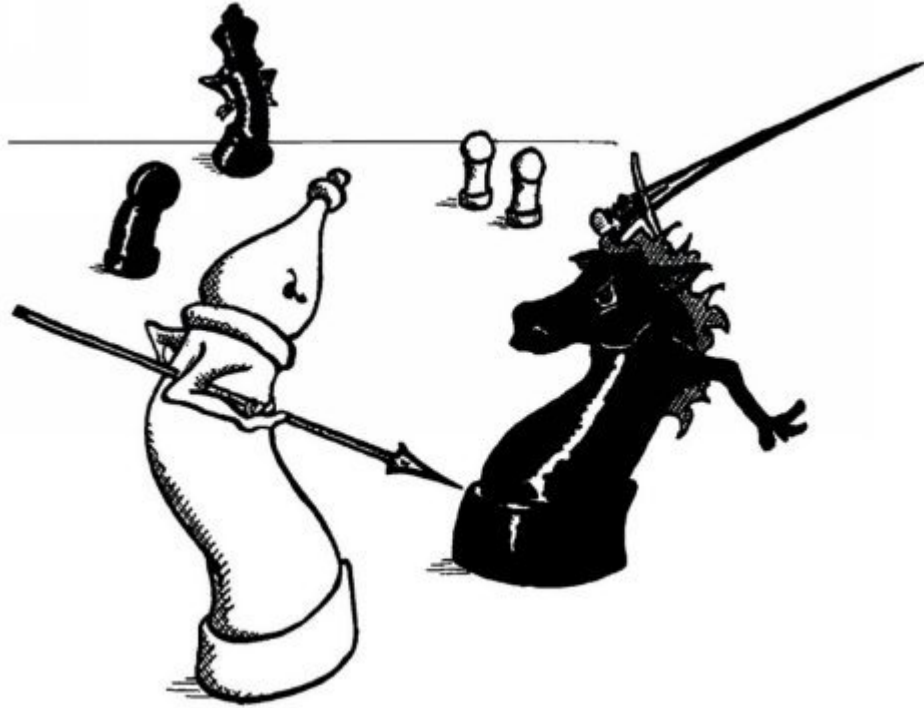


“Help your pieces so they can help you.”

Paul Morphy

LESSON 8

MINOR PIECE ENDINGS



*“As a rule, three pawns provide a better compensation
for a knight, than for a bishop.”*

Rudolf Spielmann



Pawns gain in value relative to knights and bishops in the endgame.

It has long been debated as to whether the bishop or knight is stronger in the endgame.

Knights are slow, but have the power to move to all 64 squares. Bishops are a fast, long-range piece, but limited to 32 squares.

Currently the bishop is considered to be slightly better than the knight.

Knights prefer to be centralized where they have more freedom and are stronger when they are close to the battle. They are good blockaders of passed pawns (but not rook pawns where they lack mobility on the edge of the board) and are more effective in closed positions and when pawns are located on only one side of the board.

Zugzwang can be a problem for knights, since they can't lose a tempo like bishops.

When most of a player's pawns are on the same color as their bishop, the opposing knight is generally stronger.

In general, bishops gain in value as the game progresses since pawns and other pieces trade, opening up diagonals.

Bishops are powerful when pawns are on both sides of the board and when the pawns are unblocked and free to advance.

The bishop is handicapped when the opponent's pawns are on the bishop's color (unless the bishop can capture an unprotected pawn chain), limiting its movement, but not as restricted as when friendly pawns are on the color of the bishop.

Bishops can waste tempi or moves when operating to attack or defend squares on the same diagonal and can easily blockade two pawns on the same diagonal since they can move back and forth on the diagonal and not be a victim of zugzwang.

When a bishop is required to stop separated pawns on different diagonals, often the opponent can sacrifice one of the pawns to divert the bishop from defending the other diagonal.

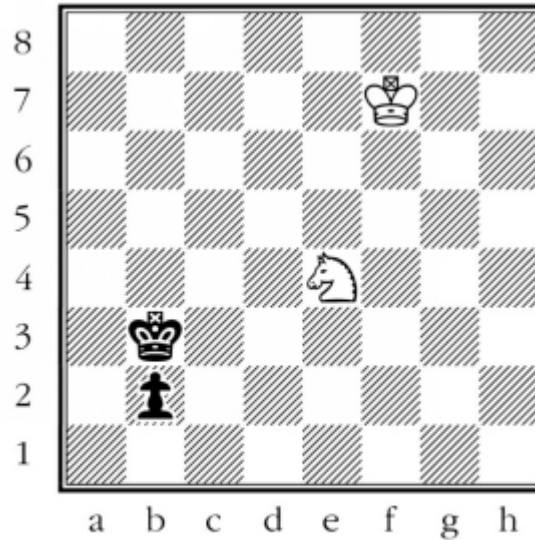
With multiple minor pieces and pawns on the board, two bishops (the bishop pair) are powerful in open positions and generally superior to two knights or bishop and knight.

The bishop pair is effective when defending against connected passed pawns and can also control each square on a file to help a friendly passed pawn promote.

In this lesson we will look at endings (all with pawns) with either minor piece vs. pawn(s), knight vs. knight, knight vs. bishop, bishops of same color, and bishops of opposite color.

Knight vs. pawn

Knight vs. pawn is normally a draw unless the knight is poorly placed and cannot easily control a square between the pawn and the promotion square.



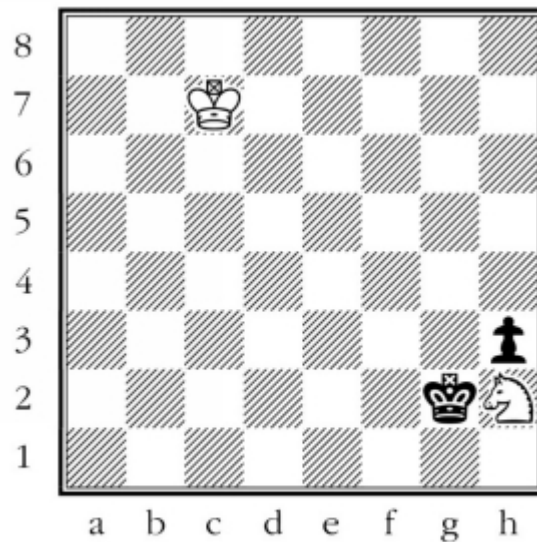
Position after 43...Kxb3 (R)
White to move

White draws with 44.Nd2+.

44...Kc2 44...Kc3 45.Nb1+ Kc2 46.Na3+ Kb3 47.Nb1 is drawn since Black's king can't chase the knight away from the promotion square.

45.Nc4 b1=Q 46.Na3+ Kb2 47.Nxb1 Kxb1 is drawn by insufficient mating material.

Rook pawns are more difficult for the knight because the knight has less mobility on the edge of the board. The knight still should be able to draw as long as the pawn hasn't advanced to the 7th rank.



Position after 50...Kg2
White to move

White's knight can prevent the rook pawn on the 6th rank from promoting.

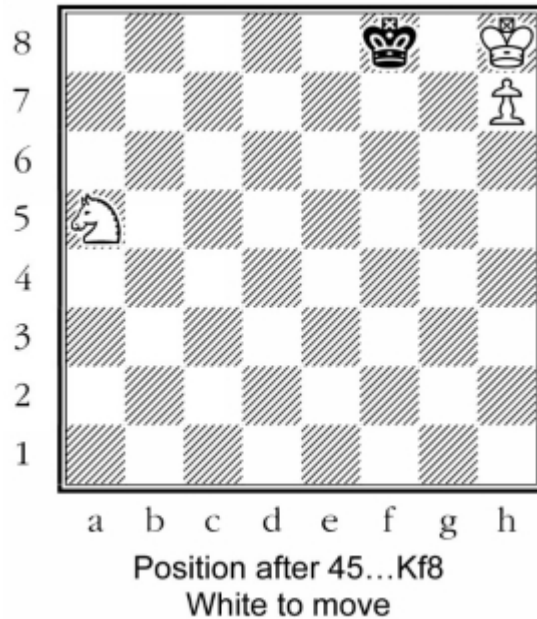
51.Ng4 Kg3 52.Ne3 Kf2 52...h2 53.Nf1+ forking the king and pawn.

53.Ng4+ Kg3 54.Ne3 Kf3 55.Nf1 Kg2 56.Ne3+ Kf2 57.Ng4+.

The game is drawn since Black cannot chase the knight away and safely advance the pawn.

Knight cannot lose a tempo, like a bishop

Unlike bishops which can move back and forth on a diagonal to waste or lose a tempo, knights cannot lose a move. Therefore, it is easier to put a knight in zugzwang.



White wins if he can move the king to the g-file.

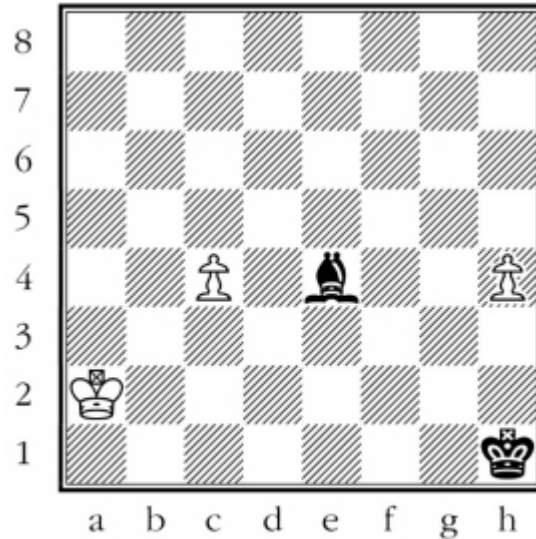
Black's king has to move back and forth between f7 and f8 to keep White's king trapped in front of the pawn. With White to move, the game is drawn after **46.Nc6 Kf7 47.Ne5+ Kf8 48.Ng6+ Kf7** because White's knight cannot lose a move.

White wins if it were Black to move after **46...Kf7 47.Nc6 Kf8 48.Ne5** because Black's king is in zugzwang and has to move to the e-file, allowing White's king to escape.

Bishop vs. pawn

When playing against one pawn, the bishop easily draws if it can attack one of the squares in front of the pawn.

When the bishop has to defend against pawns on two diagonals, the player with the pawns does better when the pawns are separated by more files. One of the pawns may be used a decoy to divert the bishop from defending squares in front of the other pawn.



Position after 44...Bxe4 (N)
White to move

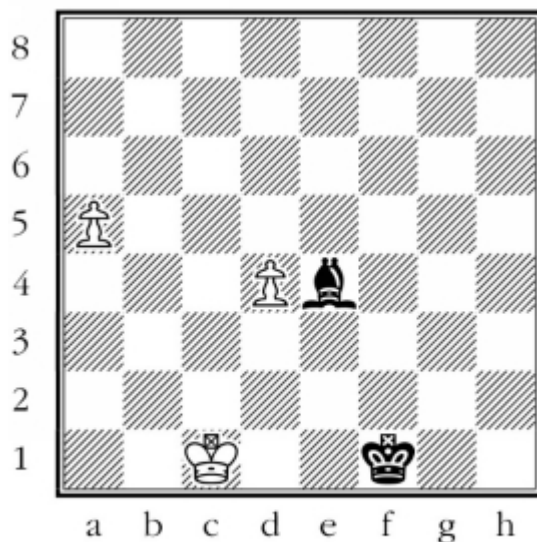
45.h5! The h-pawn safely passes through h5. 45.c5? Bf3 allows Black to draw by controlling both c6 and h5. If now either 46.h5 Bxh5 47.c6 Bg4 or 46.c6 Bxc6 47.h5 Be4, Black's bishop can stop both pawns.

45...Kg2 46.h6 Kf3 47.c5 Kf4 48.c6 48.h7? Bxh7 49.c6 Bf5 and Black can stop the c-pawn.

48...Kg5 49.c7 Bf5 White can push either pawn. After the bishop captures that pawn, the other pawn can promote.

50.h7 Bxh7 51.c8=Q is winning for White.

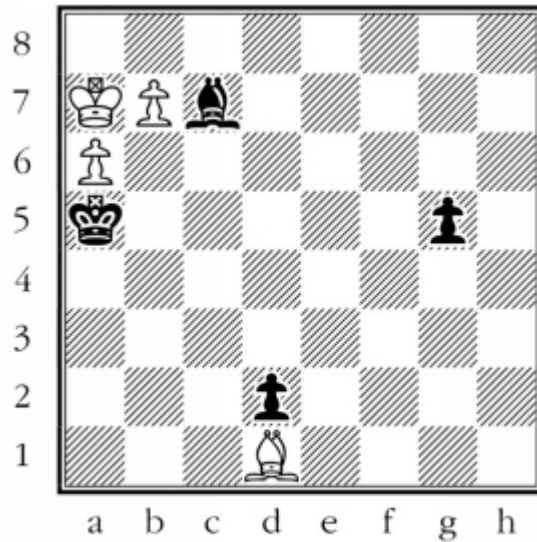
When defending against two pawns where the bishop can defend squares in front of each pawn on the same diagonal, the game is often drawn (depending on the king's positioning).



Position after 44...Be4
White to move

45.Kd2 Bd5 46.Ke3 46.Kc3 Ke2 47.Kb4 Ke3 48.Kc5 Ke4 49.a6 Ba8 and White's pawns cannot safely advance and promote.

46...Bb7 47.Kf4 Ke2 48.Ke5 Kd3 49.d5 Kc4 50.d6 Bc6 51.a6 Kb5 52.a7 Kb6 53.a8=Q Bxa8 54.d7 Kc7 55.Ke6 Bc6 and Black draws by insufficient mating material after capturing the last pawn.



Position after 67...Ka5
White to move

White's bishop on the d1-h5 diagonal prevents both Black pawns from advancing.

68.b8=Q! Bxb8+ 69.Kb7! Black's bishop is stuck on the short a7-b8 diagonal to prevent White's pawn from advancing. Black's king must stay in contact with the a6 pawn from a5 or b5 to prevent White from capturing the bishop.

White's bishop will stay on the d1-h5 diagonal to prevent Black's pawns from advancing. White will be able to play Be2 at the right time to keep Black's king off b5 and force him to a4 or b4.

69...Kb5 70.Bg4 Ka5 71.Be2 Black is in zugzwang and will have to give away a pawn.

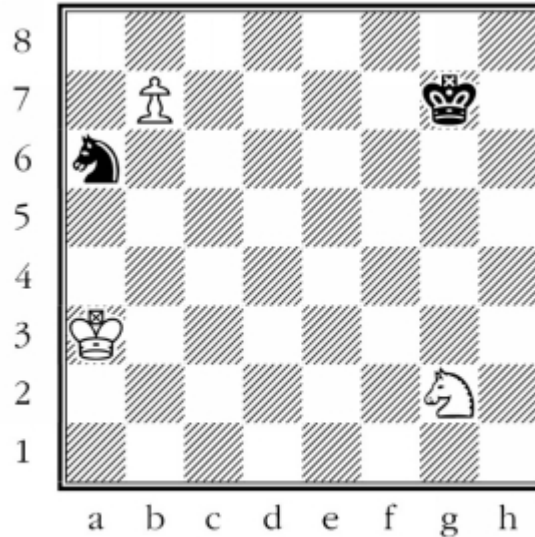
71...g4 72.Bxg4 Kb5 73.Bd1 Ka5 74.Be2 White repeats the zugzwang idea.

74...d1=Q 75.Bxd1 Kb5 76.Bf3 Ka5 77.Be2 The final zugzwang. Black will lose the bishop if the king does not attack the a6 pawn. If Black's bishop retreats on the h2-b8 diagonal, White's pawn can safely advance and promote.

Knight vs. knight

Knights vs. knights and pawn endings can be difficult to win since the defending knight can be sacrificed for the pawn, resulting in a draw by insufficient mating material.

If the pawn is on the 7th rank and is supported by both the king and knight, it can almost always promote.



Position after 41...Kg7
White to move

The correct strategy for both players is to race toward the b8 promotion square. White needs to chase Black's knight away so it can't be sacrificed for the pawn.

- 42.Nf4 Kf6 43.Nd3 Ke7 43...Ke6? 44.Nc5+** forks the king and knight. After **44...Nxc4**, the pawn can promote.
- 44.Ka4 Kd6 45.Kb5 Nb8 46.Kb6 Nc6 46...Nd7+ 47.Ka7 Kd5** trying to keep White's knight away from the pawn. **48.Nf4+ Kd6 49.Ng6** followed by **50.Nf8** to force Black's knight away from defending b8.
- 47.Ne5 Nb8 48.Ka7 Kc7 49.Nc4 Nc6+ 49...Nd7 50.Nb6 Nb8 51.Nd5+** chasing Black's king away from protecting the knight.
- 50.Ka8 Nb8 51.Nb6 Nc6 52.Nd5+ Kd6 53.Nb4** White will be able to promote the pawn since if Black's knight moves, it will no longer be able to protect b8.

Knight vs. bishop

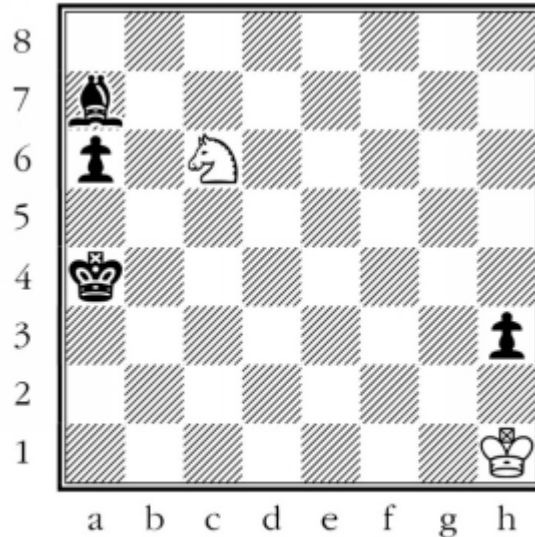
Diagonals open up as pawns and other pieces trade, increasing the value of the bishop in comparison to the knight.

Pawns on the same side of the board help the knight.

Knights are stronger than bishops when most of the pawns are on the same-colored squares as the bishop since this limits the bishop's mobility.

With pawns on both sides of the board, the bishop's value increases since it is a long-range piece that can influence both sides of the board at the same time.

Bishops have the ability to waste tempi or moves, where knights cannot.



**Position after 38.Nc6
Black to move**

Black's goal is to safely advance the a-pawn with the support of the king and bishop, but Black's king is blocking the pawn's path.

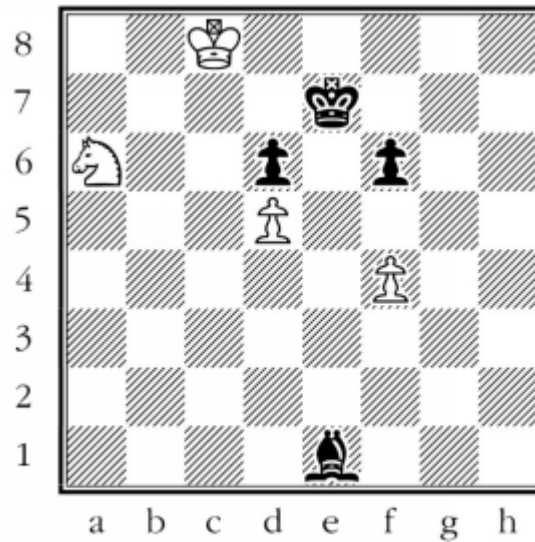
White would like to sacrifice the knight for Black's a-pawn to force a draw since that would leave Black with a rook pawn and the wrong-colored bishop.

38...Kb5! sacrificing the bishop. 38...Bc5? 39.Nb8 a5 40.Nc6 followed by 41.Nxa5 with a draw.

39.Nxa7+ Kc5! making the knight take the long route via the kingside in an attempt to stop the a-pawn.

40.Nc8 40.Kh2 a5 and the pawn can promote.

40...a5 41.Ne7 a4 42.Nf5 a3 43.Ne3 a2 44.Nc2 Kc4 45.Kh2 Kc3 46.Na1 Kb2 Black's knight is trapped and the a2 pawn will soon promote.



Position after 35...Ke7
White to move

White wins with **36.f5!** fixing Black's pawns on the dark squares, the same color as Black's bishop. Black's bishop cannot harm White's pawns on the light squares.

If Black is allowed to move the f6 pawn to f5, White's pawn on f4 is in danger from Black's bishop.

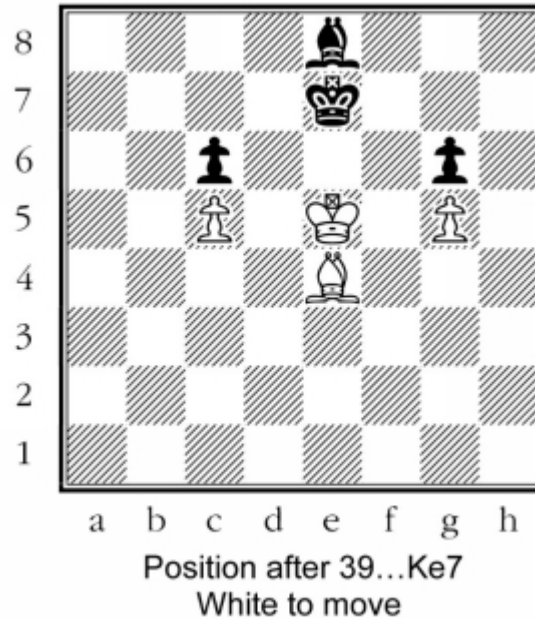
36...Bf2 37.Nb8 White's focus is to win the d6 pawn.

37...Bb6 38.Kb7 Bc5 39.Kc7 Ba3 40.Nc6+ repositioning the knight as it maneuvers to attack d6. The knight's destination is c8, where it attacks the d6 pawn and prevents Black's king from defending it from e7.

40...Ke8 41.Na7 Bb4 42.Nc8 Ba5+ 43.Kc6 White will win the d6 pawn and eventually the game.

Bishops on the same color

In endgames with bishops on same color, you generally don't want your pawns blocked on squares of the color of the bishops since your bishop will have limited mobility.



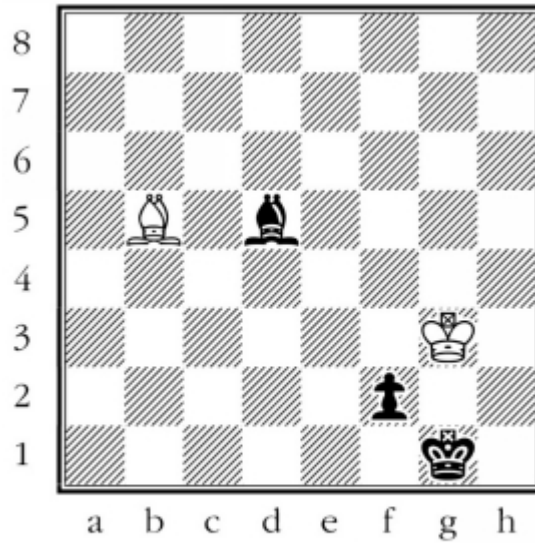
Both players have light-squared bishops and all of Black's pawns are stuck on light squares. Black's bishop is tied down protecting his own pawns while White doesn't have to worry about Black's bishop attacking his pawns.

If it were Black to move, he would be in zugzwang and have to move the bishop and give up one of the pawns, or move the king and allow White's king to invade.

While Black's bishop is restricted to two squares on the a4-e8 and h5-e8 diagonals, White's bishop has more freedom and potential squares available to it.

40.Bf3 Other bishop moves also work with the same maneuvering idea.

40...Bd7 41.Bg2 Bd8 42.Be4 Black is in zugzwang.



Position after 46.Bb5
Black to move

Black needs to chase White's bishop away from defending the f1 promotion square in order to safely promote the pawn.

Here is a possible variation of how Black can achieve this.

46...Bg2 47.Bc4 Bf1 forcing the bishop from the f1-a6 diagonal.

48.Bd5 Bb5 49.Bg2 moving to the shorter f1-h3 diagonal.

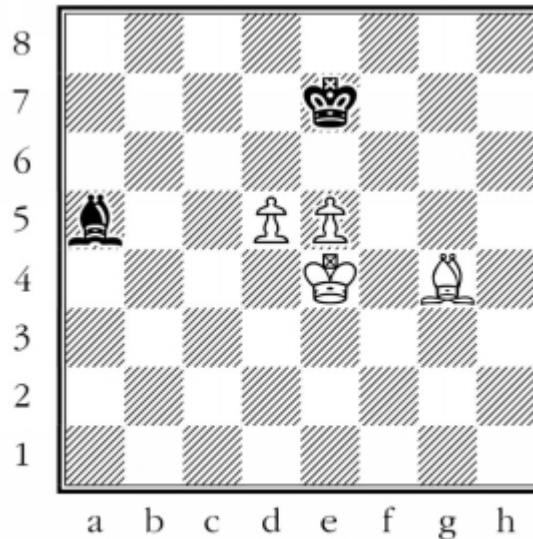
49...Bd7 threatening to trade bishops if White's bishop moves to h3.
50.Kf3 the only move keeping the bishop safely on the short diagonal.

50...Bc6+ 51.Kg3 Bxg2 and Black's pawn can promote.

Bishops on opposite colors

Bishops on opposite colors can't attack the same squares or be exchanged for each other on the same diagonal.

The weak side often has decent drawing chances in opposite-colored bishop endings because of the ability to blockade the opponent's pawns on the color of weak side's bishop to prevent them from advancing and promoting.



Position after 53.d5
Black to move

White has two connected passed pawns in this opposite-colored bishop ending.

Black can draw by playing **53...Bc7!**

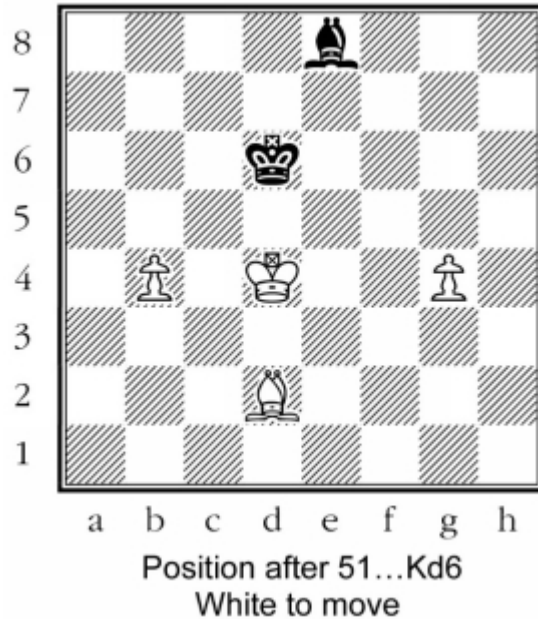
53...Bb4, which also defends d6, loses to 54.Kd4 Ba3 55.Kc4. Black is in zugzwang and White will be able to safely advance the pawn to d6.

54.Bh3 54.d6 Bxd6 55.exd6+ Kxd6 is a draw by insufficient mating material. 54.e6 gives Black a fortress position where the king can stay on e7 while the bishop moves to any safe square that stays in contact with the d6 square.

54...Bb8 The game is drawn since Black's bishop can move back and forth between c7 and b8 to prevent White from safely advancing the pawn to d6. If White's king moves to c5 in order to protect d6, Black's bishop can capture the pawn on e5. White cannot make progress.

If it were White to move in the diagrammed position above, White wins with **54.d6+ Ke8 55.e6 Bd8 56.Kf5 Bh4 57.Bh5+ Kd8 58.Bg6** and Black is in zugzwang. Black's king or bishop will have to move away from defending the e7 square.

Against two isolated passed pawns, the strong side's winning chances increase the further the pawns are separated. The bishop must defend one pawn and the king the other. The strong side's king wants to attack on the side of the board where the defender's bishop is located in order to advance the pawn and win the bishop when it is forced to capture the pawn to prevent it from promoting.



White is two pawns ahead with the pawns separated by four files in this opposite-colored bishop ending. Black's king will have to defend against one pawn while the bishop defends the other.

52.Bf4+ Ke6 choosing to move the king to the kingside.

If Black moves to the queenside with 52...Kc6, White wins by moving the king to the kingside to battle the bishop with 53.Ke5. After 53...Kb5 54.Bd2 Bc6 55.g5 Be8 56.Kf6 Bc6 57.g6 Bd5 58.Kg7 Bc4 59.Kf8 Bd5 60.g7 Black will have to sacrifice the bishop for the pawn when it reaches g8. White's king will then be able to move to the queenside to help promote the b-pawn.

53.Kc5 moving the king to the queenside, opposite that of Black's king.

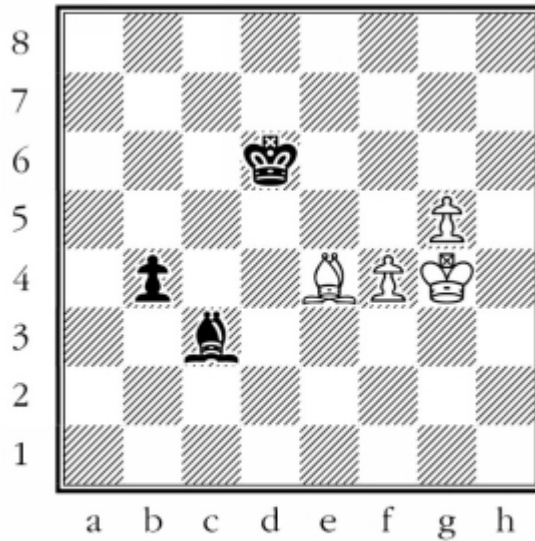
53...Kd7 trying to keep the kings on the same side of the board. On the other side of the board, the weak side's bishop can prevent that passed pawn from advancing.

54.b5 Kc8 55.Kb6 Also winning is 55.b6 Kb7 56.Bc7. With the b-pawn protected, White's king can win the king and pawn vs. bishop battle on the kingside.

55...Bg6 56.Ka7 Bd3 57.b6 Be4 58.g5 Black can't stop both pawns from promoting.

Note that if White's b4 pawn were instead on a5, the game would be drawn by Black's king moving to the queenside to block the a-pawn. Meanwhile, on the kingside, White would be able to force Black to give up the bishop to for the g-pawn, but would be unable to win because the a8 square is not on the same color as White's bishop.

The strong side can often win opposite-colored bishop endings if the king is better placed, there are more pawns on one side of the board, a passed pawn and sufficient play exists on the other side of the board, or the weak side's pawns are on the same color as the bishop and the strong side has the initiative.



Position after 95...Kxd6 (Q)
White to move

White is a pawn ahead with connected passed pawns on the kingside.

White can win this position even though Black has drawing chances due to the opposite color bishops.

96.Bc2 preventing 96...b3.

96...Ke7 97.Kh5! White must prevent Black's king from reaching g7. 97.f5? Kf7 98.Kh5 Kg7 is a draw because Black can block the pawns on the dark squares after 99.g6 and can sacrifice the bishop for both pawns if

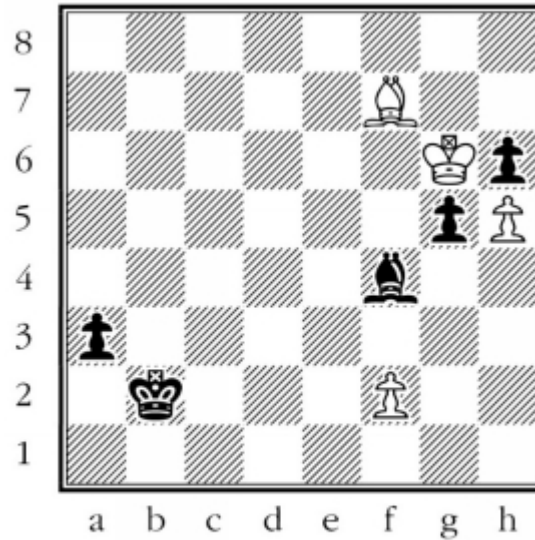
White plays 99.f6+.

97...Kf7 98.Kh6! Kg8

A possible winning variation for White is **99.f5 Kh8 100.Kg6 Bd4 101.f6 Be3 102.Kf5 Kg8 103.Bb3+ Kh8**

104.g6 Bh6 105.Ke6 Kg8 105...Bg7 106.fxg7+ wins for White.

106.Ke7+ Kh8 107.Kf7 Bf4 108.g7+ Kh7 109.g8=Q+ Kh6 110.Qg6 mate.



Position after 69.Kg6
Black to move

Both players are trying to promote a pawn.

69...Be3! a brilliant bishop sacrifice. 69...g4? 70.Kf5 wins the g4 pawn and draws since White's king can reach h1 to prevent Black's h6 pawn from promoting.

70.Kxh6 White cannot stop both the a- and g-pawns after 70.fxe3 g4 71.Kxh6 g3. If 70.f3, then 70...a2 71.Bxa2 Kxa2 72. Kxh6 g4+ is easily winning for Black.

70...g4+ 71.fxe3 g3 72.Kh7! 72.Kg7 allows Black's g-pawn to promote with check.

72...g2 73.h6 g1=Q promoting first.

74.Kh8 a2 75.Bxa2 Kxa2 76.h7 76.e4 Qg6 77.h7 Qf7 78.e5 Qf8 mate transposes to the game.

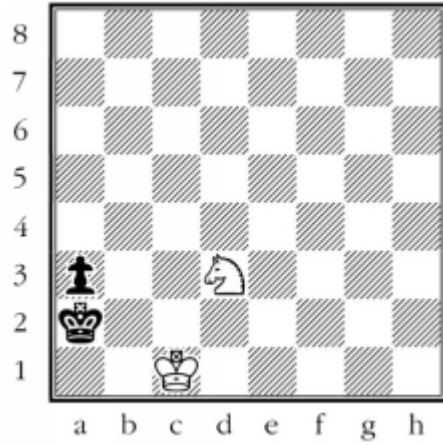
76...Qg6 77.e4 If White didn't have the e-pawn, the position would be drawn.

77...Qf7 78.e5 Qf8 mate.

Basset Hound Problems



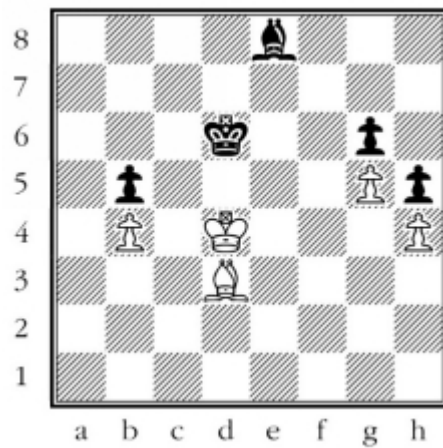
8-1



Position after 58...a3
How does White win the game?



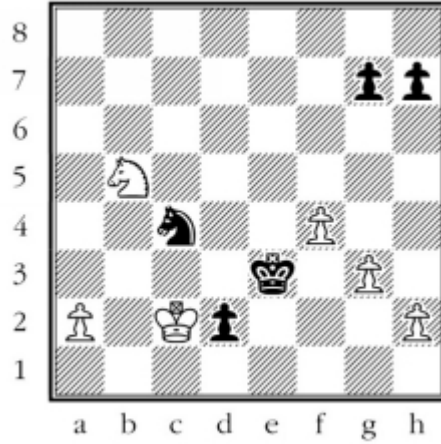
8-2



Position after 44...Kd6
How does White win the game?



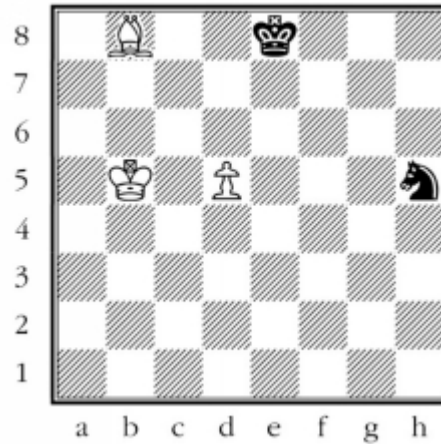
8-3



Position after 34.Nb5
What is Black's best move?



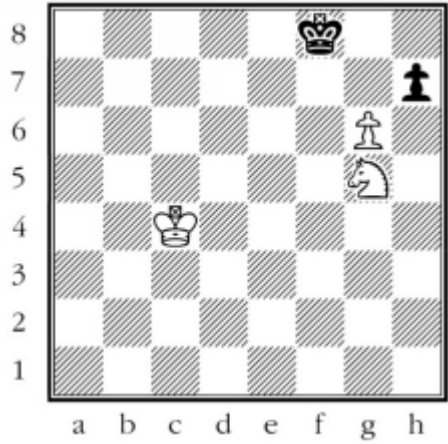
8-4



Position after 41...Nxh5 (p)
What is White's best move?



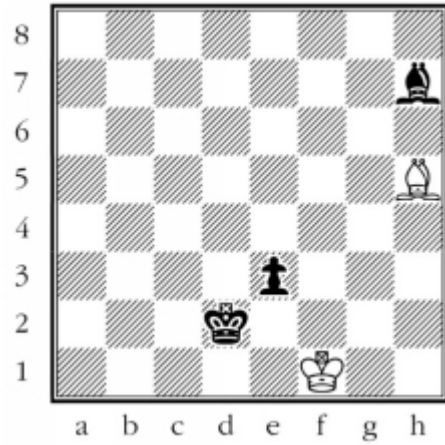
8-5



Position after 39...Kf8
 What is White's best move?



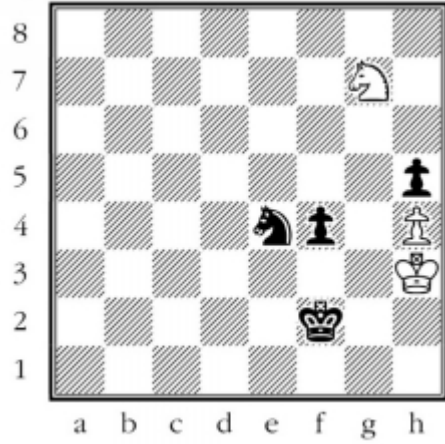
8-6



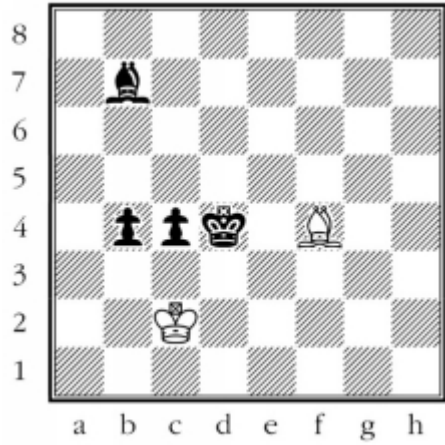
Position after 45.Kf1
 How does Black win the game?



8-7

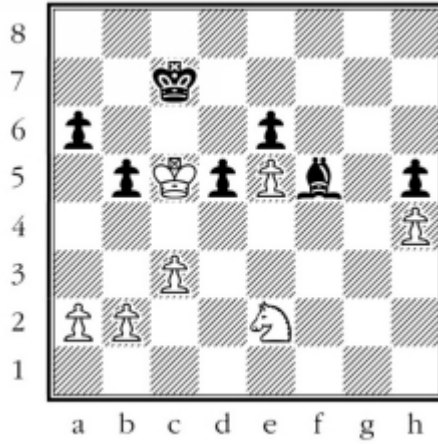


Position after 49.Nxg7 (p)
 What is Black's best move?



Position after 34...Kd4
 How does White draw the game?

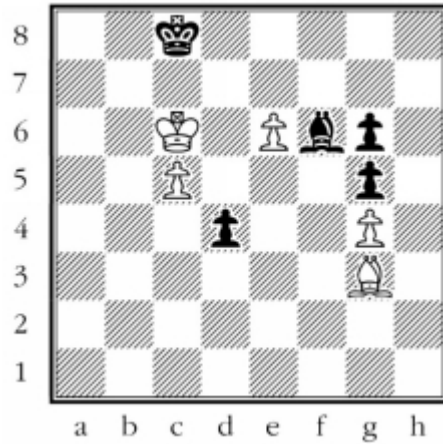




Position after 44...Bf5
 How does White win the game?



8-10

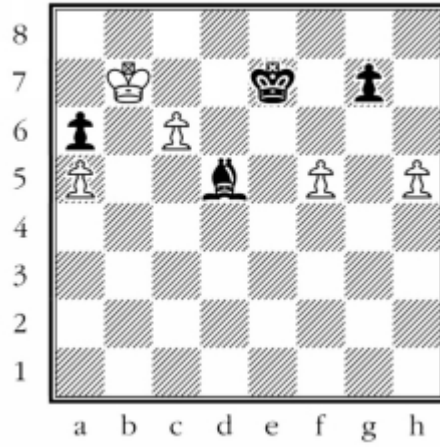


Position after 51...d4
 What is White's best move?

Chess Detective Problems



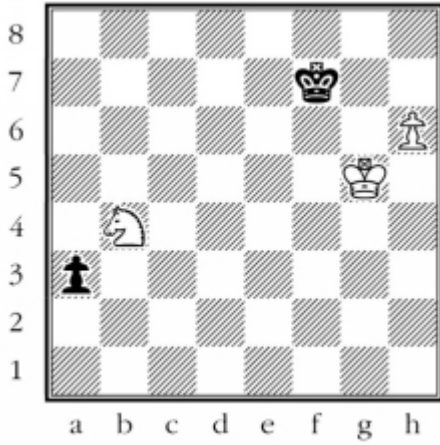
8-11



Position after 56...Bd5
What is White's best move?



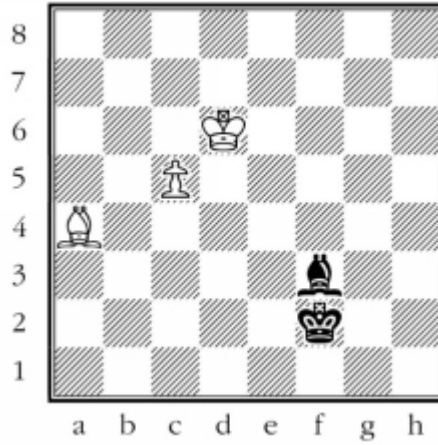
8-12



Position after 47...Kf7
What is White's best move?



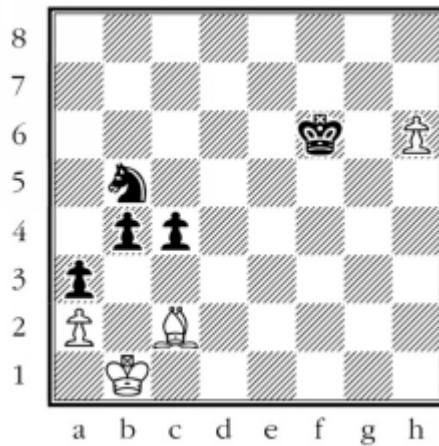
8-13



Position after 43...Kf2
How does White win the game?



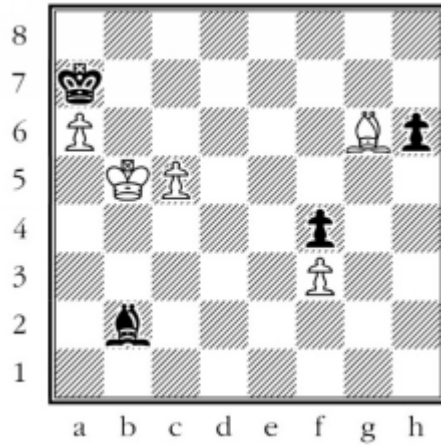
8-14



Position after 48.h6
What is Black's best move?



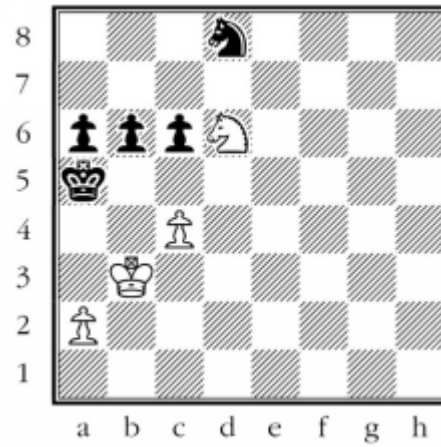
8-15



Position after 44...Ka7
 What is White's best move?



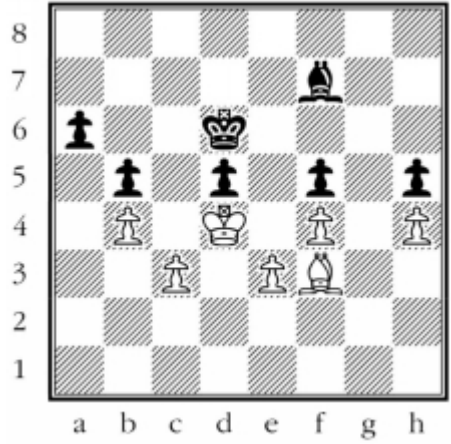
8-16



Position after 49...Nxd8 (B)
 What is White's best move?



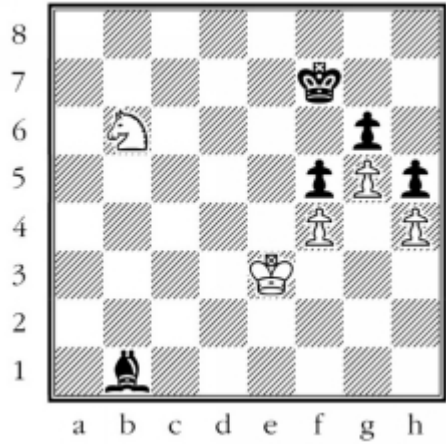
8-17



Position after 38...Bf7
How does White win the game?



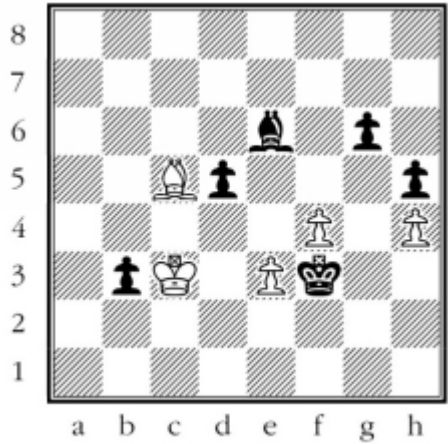
8-18



Position after 52...Kf7
How does White win the game?



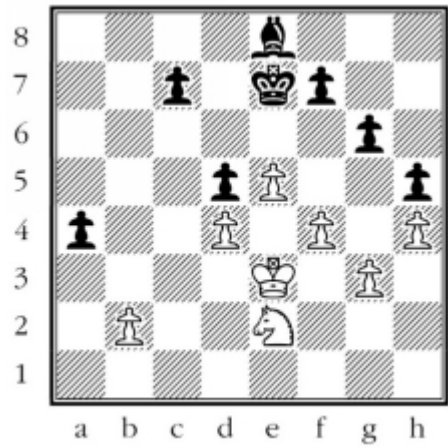
8-19



Position after 59.Bc5
 What is Black's best move?



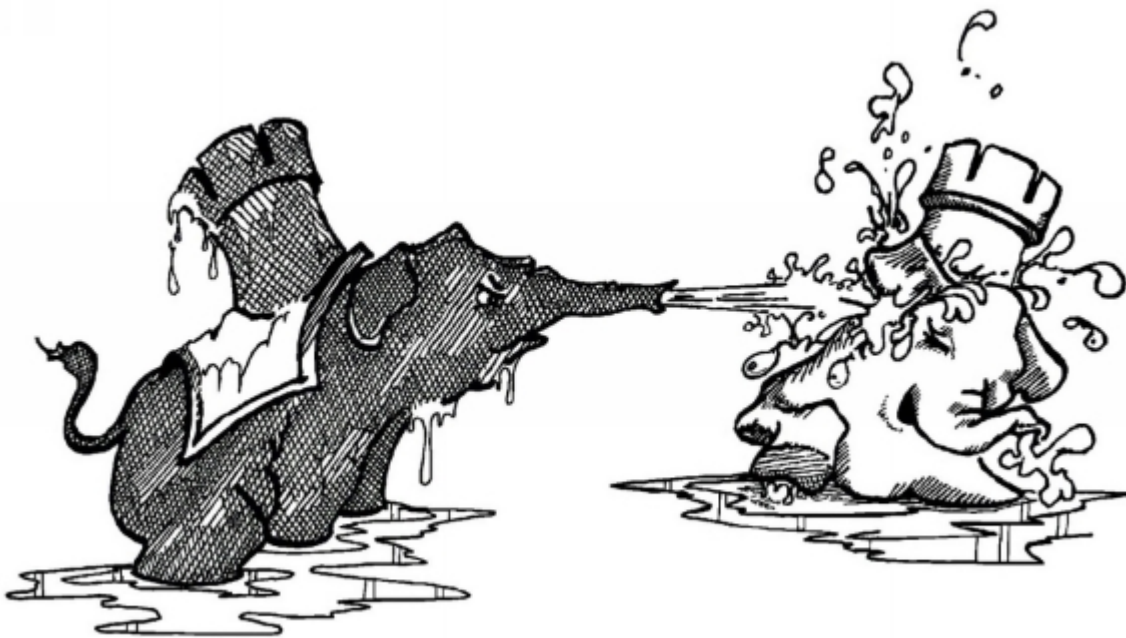
8-20



Position after 40...Ke7
 How does White win the game?

LESSON 9

ROOK ENDINGS



“Endings of one rook and pawns are about the most common sort of endings arising on the chess board. Yet though they do occur so often, few have mastered them thoroughly. They are often of a very difficult nature, and sometimes while apparently very simple they are in reality extremely intricate.”

José Raúl Capablanca



Since rooks typically enter the game later than other pieces, rook and pawn endings are quite common. Many of the techniques that apply to piece and pawn endings also apply to rook endings.

Like in the middlegame, one of the goals for rooks in the endgame is to reach the 7th rank. There are usually enemy pawns there to attack and the rook often prevents the opponent's king from leaving the back rank to enter the battle.

A rook on the 7th rank is considered to be worth a pawn in material.

Checkmate occurs more frequently in rook endings than minor piece endings since rooks are more powerful than knights and bishops.

You should strive to mobilize your rooks, centralize your king, and obtain a superior pawn structure.

A fundamental endgame principle is to activate the rook and keep it active.

Generally, use your king to block passed pawns, not your rook.

Rooks generally belong behind passed pawns whether playing offense or defense because as the pawn advances, the rook's scope increases.

Rooks are good at cutting off the opposing king and threatening repeated checks.

In rook and pawn vs. rook endings, the weak side usually loses if their king cannot reach the promotion square in front of the pawn. If the king can reach the promotion square, it is usually a draw.

A rook and two pawns usually win against a rook.

In this lesson we will examine rook endings including rook vs. minor piece, rook and minor piece vs. rook, the Lucena position, the Philidor position, well- and poorly-placed rooks, cutting off the king, chasing down passed pawns, rook tactics, two rooks on the 7th rank, and positions where one player has an extra pawn when all the remaining pawns are on the same side of the board.

Rook vs. minor piece

Because winning or losing the exchange is not uncommon, rook vs. minor piece endings occasionally occur. Rook vs. minor piece endings without pawns is usually a draw, with a few exceptions.

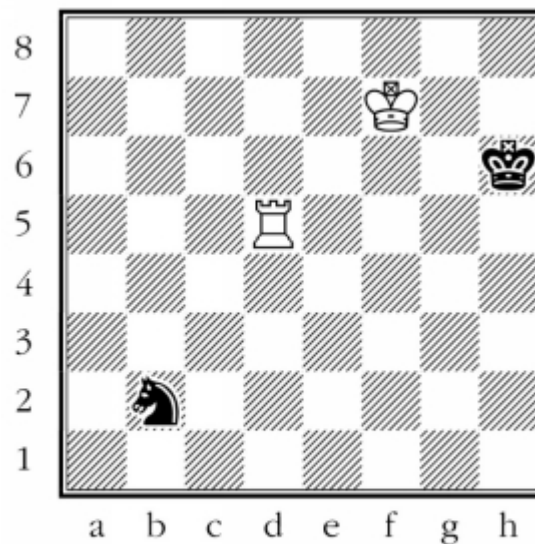
Rook vs. knight

The knight has good drawing chances against a rook if the knight is near its king.

The rook can win when the knight is away from its king. The strong side strives to keep the king and knight separated and can win by combining attacks against the king (mate threats) and trapping the knight.

The strong side with the rook can also win by pinning and winning the enemy knight, usually with help from the king.

Of course, the defender should strive to keep their king in the center of the board. With the king on the edge of the board or in the corner, defense becomes more difficult.



Position after 43...Kh6
White to move

Black's king is against the edge of the board, separated from the knight.

44.Kf6! Kh7 44...Nc4 loses to 45.Rd4 threatening the knight and 46.Rh4 mate.

45.Rd7+ Kg8 45...Kh6 46.Rd2 attacking the knight and threatening mate on h2. 45...Kh8 46.Kg6 Kg8 47.Rd8 mate.

46.Rg7+! Kh8 46...Kf8 loses to 47.Rb7 with the double threat of 48.Rb8 mate and an attack on the knight.

47.Rb7 White is trying to attack the knight and threaten mate at the same time. 47.Kg6 Nd3 48.Re7 Nf4+ keeps Black alive for a while longer.

47...Nd3 48.Rd7 Nc5 49.Rd5 Ne4+ 50.Kg6 threatening 51.Rd8 mate.

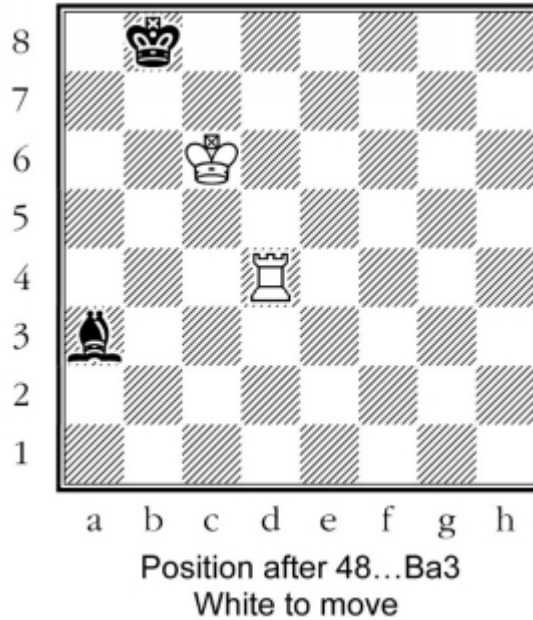
Rook vs. bishop

As in the case of rook vs. knight, the defender's king should try to stay in the center.

If forced out of the center, the weak side's king should run toward the corner opposite that of the bishop.

When the king is in a corner opposite the color of the bishop, like a king on a1 and bishop on b1, the game can end in stalemate when the opponent's rook pins the bishop to the king.

When the weak side's king is in the corner of the color of the bishop, like a king on a1 and bishop on c1, the bishop can be pinned to the king on the rank by the rook, placing the king in zugzwang where it has to move and abandon the bishop.



Black's king is close to the light-squared corner, the corner he wants to be close to since he has a dark-squared bishop.

49.Re4! gives White a winning position in all variations:

49...Kc8 50.Re8 mate.

49...Ka7 or 49...Ka8 and White's rook can win the bishop with the 50.Ra4+ fork.

White's king can capture the bishop after 49...Bc5 or 49...Bd6.

The rook can capture the bishop after 49...Bb4 or 49...Be7.

White's rook forks Black's king and bishop after 49...Bf8 with 50.Re8+.

49...Bb2 50.Rb4+ forks the king and bishop.

49...Bc1 50.Kb6! and if 50...Ka8, then 51.Re8 mate or 50...Kc8 51.Rc4+ with a fork.

Rook and minor piece vs. rook

Rook and minor piece vs. rook endings are theoretically drawn, but can be difficult for the defender to hold, even at the master level.

The weak side should keep accurate score with the goal of claiming a 50-move draw, being especially careful when the king is against the edge of the board or in the corner due to potential mate threats.

In rook and knight vs. rook endings, the weak side's rook should strive to maintain maximum mobility and try to annoy the enemy king from a distance to avoid potential knight forks. The strong side often has to use the knight as a shield from annoying checks, limiting its mobility in a mating attack.

Rook and bishop vs. rook is a more difficult ending for the weak side to draw.

The weak side's rook should again try to maintain maximum mobility and can limit the bishop's mobility by pinning it to the strong side's king when the bishop is used as a shield from checks.

Since the details of correct play of rook and minor piece vs. rook endings are complicated and well-beyond the scope of this book, we will focus on more practical rook and pawn endings that the amateur player will more frequently be involved in.

Lucena position

One of the most important positions in rook and pawn endgames is the Lucena position, named after the Spaniard Luis Ramirez de Lucena who lived during the late 1400's to early 1500's.

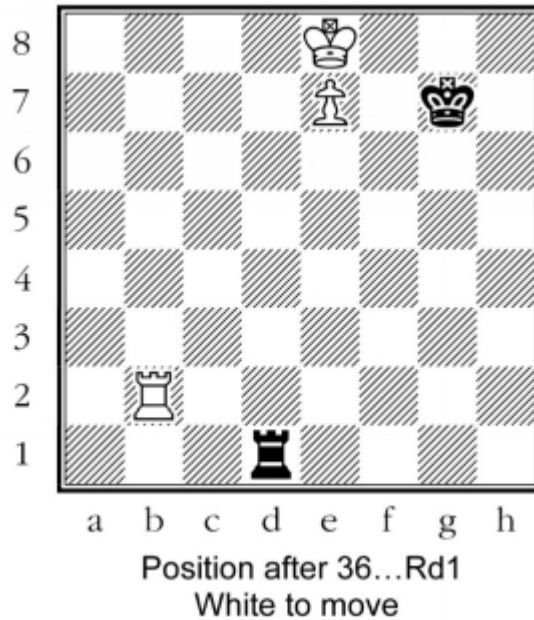
In rook and pawn vs. rook endings, if the weak side's king can block the pawn, the result of the game is usually a draw.

If the weak side's king cannot get in front of the pawn, and the strong side can advance the pawn to the 7th rank with the help of the king, the strong side usually wins. The goal is to either promote the pawn or force the opponent to give up their rook for it.

The defender wants to check the king from behind the pawn and force him to the promotion square so the pawn can't promote. The weak side's king wants to be close enough to prevent the enemy king from escaping on one side, while their rook cuts off the strong side's king on the other side of the pawn.

The winning methodology, which works for all non-rook pawns, is called the Lucena position. In the case of the rook pawn, if the weak side's king is close enough, he can trap the strong side's king in front of the pawn and draw.

When trading pieces down to a rook and pawn vs. rook endgame, players should calculate whether or not they can achieve or prevent their opponent from achieving the Lucena position.



Here is a typical Lucena position with the pawn on a center file.

White's king is trapped in front of the pawn by Black's king and rook.

The Lucena position sets up when White first checks the Black king on the g-file to chase him further from the pawn to the h-file with **37.Rg2+**.

Another winning variation for White is 37.Rb8 Rd2 38.Rd8 Rf2 39.Kd7 Rd2+ 40.Kc6 where White's king can zigzag back toward Black's rook to escape the checks and then promote the pawn.

37...Kh7 37...Kf6 allows the pawn to safely promote after 38.Kf8 Rh1 39.e8=Q Rh8+ 40.Rg8.

38.Rg4! The winning idea for White is to move the rook to the 4th rank while keeping Black's king cut off on the h-file. This is called building a bridge. Moving the rook to the 5th rank places the rook too close to Black's king, and moving it to the 3rd rank leaves it too far away from White's king when he moves toward it out from in front of the pawn.

38...Kh6 38...Rd2 39.Kf7 Rf2+ 40.Ke6 Re2+ 41.Kf6 Rf2+ (41...Re1 42.Rg5 with the threat of 43.Re5.) 42.Ke5 Re2+ 43.Re4 and White will be able to promote the pawn.

39.Kf7 Rf1+ 40.Ke6 Re1+ 41.Kf6 threatening 42.Rh4 mate.
41...Rf1+ 42.Ke5 Re1+ 43.Re4 blocking the checks. Since Black's king is outside the square of White's e-pawn, the pawn can promote.

Philidor position

Another important rook and pawn ending is the Philidor position, named for France's Francois-André Danican Philidor who analyzed the position in 1777.

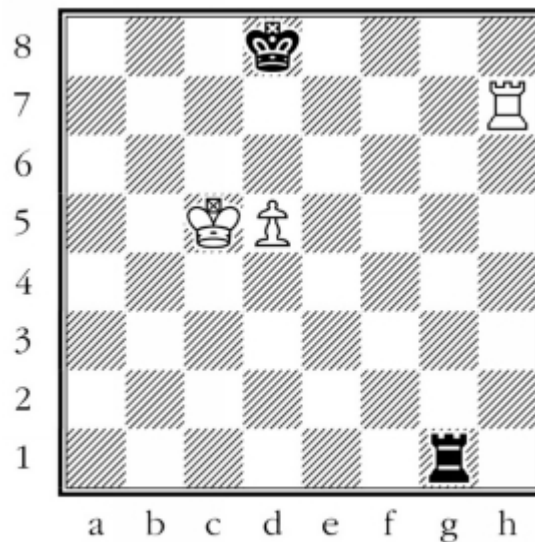
The Philidor position is a drawing technique where the defender with a rook can draw against a rook and pawn. It is sometimes referred to as the 3rd rank defense because the defender's rook cuts off the opposing king on the 3rd rank. The position is drawn for all eight pawns.

The goal for the defender is to place their king in front of the pawn and their rook on its 3rd rank, preventing the opponent's king from advancing to the 6th rank.

The rook should stay on the 3rd rank until the pawn advances.

Once the strong side advances the pawn, the rook must move behind the pawn where it can continuously check from behind with the goal of forcing a draw by repetition.

A key for the defender is to not allow their rook to be passively placed.



Position after 54.Kc5
Black to move

White threatens to play 55.Kc6 and check Black's king out from in front of the pawn. After 55...Rg6+ 56.d6 or 55...Rc1+ 56.Kd6 Black is out of safe checks and the position is winning for White.

54...Rg6! preventing White's king from advancing. 54...Rc1+? 55.Kd6 with the threat of 56.Rh8 mate. After 55...Kc8 or 55...Ke8, White can play 56.Rh8+, advance the king and pawn, and achieve the Lucena position.

55.d6 White can't make progress if Black shuffles the rook along the 3rd rank.

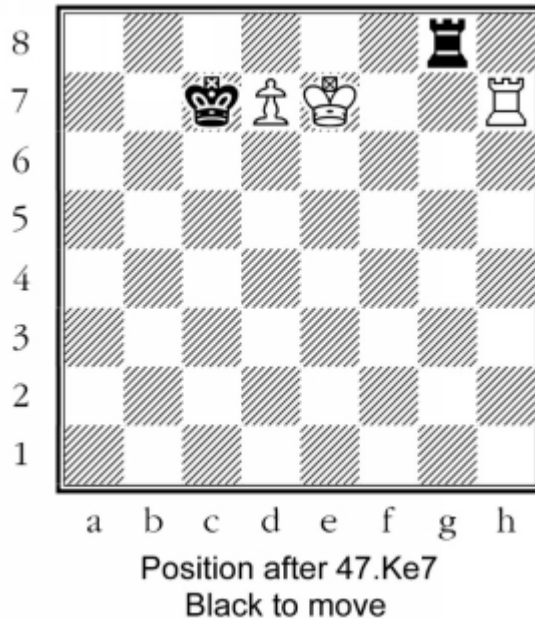
55...Rg1! Now that the pawn advanced, Black can draw by checking from the rear. 55...Rg5+? 56.Kc6 Rg8

57.Ra7 is winning due to the threat of 58.Ra8 mate.

56.Kc6 Rc1+ 57.Kd5 Rd1+ 58.Ke6 Re1+ and White's king cannot escape the annoying checks.

Last-rank defense

As long as Black shuffles the rook back and forth on the correct squares on the back rank, the game is drawn since White cannot make progress.



47...Rd8! Losing is 47...Rb8? 48.Rh1 Ra8 49.Rc1+ Kb7 and the pawn will promote.

48.Ke6 Rg8 48...Rb8? loses to 49.Rh1.

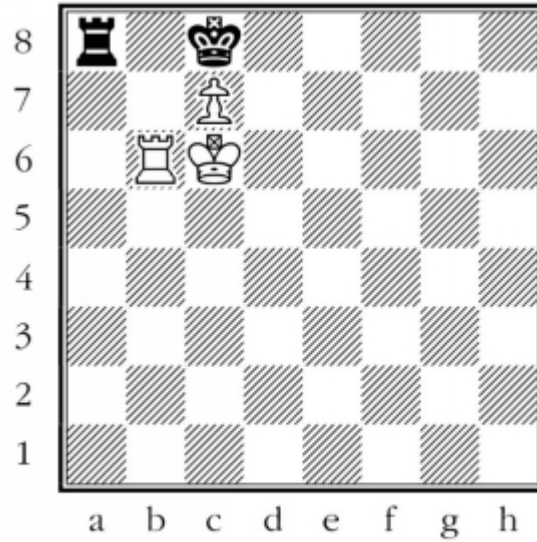
Also losing is 48...Kc6? 49.Rh1! Rg8 (49...Rxd7 50.Rc1+ wins Black's rook.) 50.Rc1+ Kb7 51.Kf7 Rh8 52.Rh1! preventing Black from checking on the h-file. 52...Ra8 (52...Rxb1 53.d8=Q with a queen vs. rook ending which we will examine in Lesson 10.) 53.Rd1 Kc7 54.Ke7 Rd8 55.Rc1+ wins Black's rook.

49.Ke7 49.Rh1 Rg6+ (49...Ke8 moving to the promotion square is drawing.) 50.Ke7 Rg7+ 51.Ke6 Rxd7 52.Rc1+ Kd8 is a draw.

49...Rd8 Black can draw since White cannot make progress.

Defender with a poorly placed rook

The defender can lose when their king blocks the pawn and their rook is poorly placed.



Position after 53...Ra8
White to move

Black's king is blocking the passed pawn.

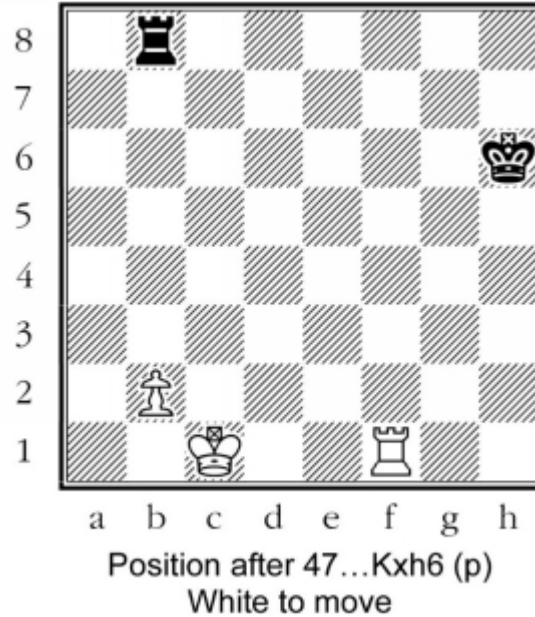
Black's poorly placed rook in the corner defends b8, but has limited mobility.

White wins with **54.Kd6!** putting Black in zugzwang.

54...Ra1 54...Ra6 56.Rxa6 is winning for White since Black isn't stalemated and can play 56...Kb7.
55.Rb8 mate.

Cutting off the king

Rooks have the ability to cut off the opposing king from the action along a rank or file.



Both kings would like move toward to the b8 promotion square as quickly as possible.

If Black's king can get in front of the pawn the game is drawn.

White wins by cutting off Black's king from approaching the pawn.

48.Rg1! pinning Black's king on the h-file and gaining a critical tempo. 48.Kc2? Kg6 49.Kc3 Rc8+ 50.Kd3 Rb8 51.Rb1 Kf6 52.Kd4 Ke6 53.Kc5 Kd7 and Black can draw.

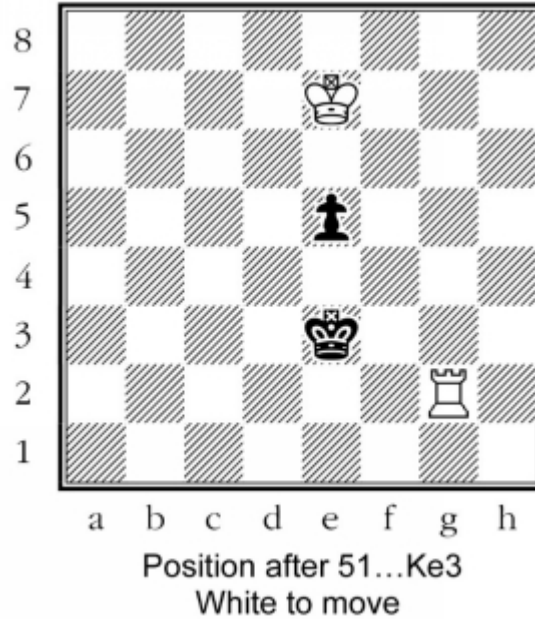
White wins after **48...Kh5 49.Kc2 Rc8+ 50.Kd3 Rb8 51.Kc3 Rc8+ 52.Kd4 Rb8 53.Rb1 Kg6 54.b4 Kf7**

55.Kc5! Ke7 56.Kc6 Kd8 57.Rd1+ Ke7 57...Kc8 58.Rh1 wins for White.

58.b5 Black's king is cut off by White's rook on the d-file. White's king can safely escort the pawn up the b-file.

Chasing down a passed pawn

White can win if the king can retreat and catch Black's passed pawn before it promotes.



White's king moves toward the pawn with **52.Ke6**. White wants to keep the option open to retreat on the d-file or f-file. White's king will move to the file on the opposite side of the pawn that Black's king chooses.

52...e4 53.Rg5! White's rook belongs behind the pawn where it doesn't interfere with the king's retreat.

53.Ke5? Kf3 54.Rh2 e3 55.Rh3+ Kf2 56.Kf4 e2 57.Rh2+ Kf1 58.Kf3 e1=N+ with a drawn position.

53...Kf3 53...Kd3 54.Rd5+ Kc2 (54...Ke2 55.Ke5 e3 56.Ke4 Kf2 57.Rf5+ Ke2 58.Rf3 wins the pawn.)

55.Re5 Kd3 56.Kf5 e3 57.Kf4 e2 58.Kf3 catching up to the pawn.

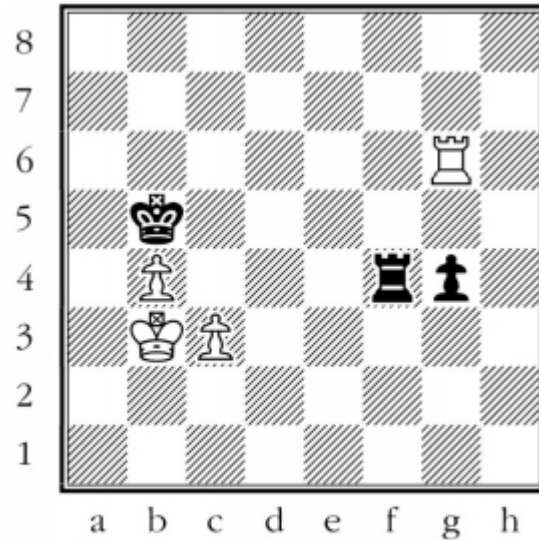
54.Rf5+ forcing Black's king in front of the pawn or a file away from it, gaining a tempo for White's rook when it moves behind the pawn.

54...Kg2 54...Ke2 55.Ke5 e3 56.Ke4 Kd2 57.Rd5+ Ke2 58.Rd3 wins the pawn.

55.Re5 Kf3 56.Kd5 e3 57.Kd4 e2 58.Kd3 and White's king catches up with the pawn.

Rook tactics

Tactics are often present in rook endings.



Position after 49...Kb5?
White to move

A potentially dangerous position occurs when a rook is protected by its king, while attacked by the enemy king at the same time.

The enemy rook can often check the king to chase him away from guarding the rook.

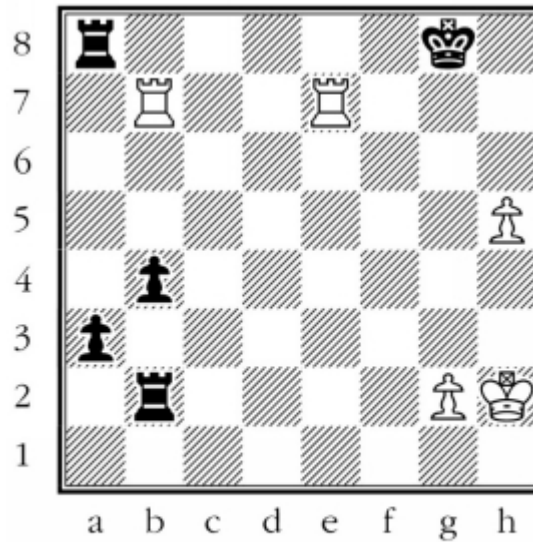
50.c4+! Rxc4 Black's only move.

51.Rg5+ wins Black's rook after 51...Rc5 with 52.Rxc5+ or 51...Kb6 with 52.Kxc4.

Two rooks on the 7th rank

The mobility of a rook on the 7th rank is generally considered to be worth a pawn in the endgame.

Two rooks on the 7th rank is usually winning due to potential of rook-rook roller mate threats against a king on the back rank.

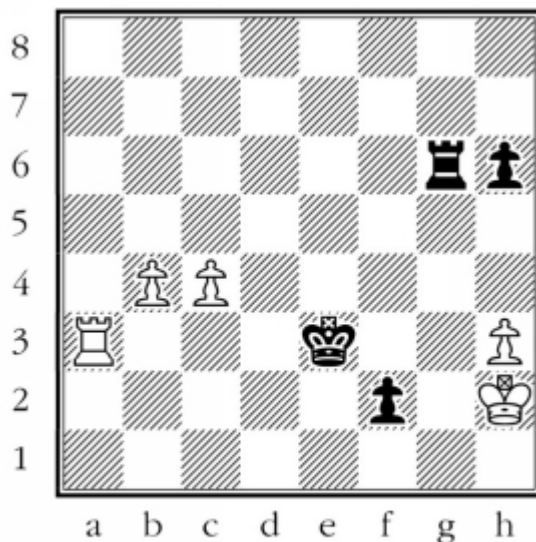


Position after 43...a3
White to move

White wins with **44.Rg7+ Kf8** 44...Kh8 45.Rh7+ Kg8 46.Rbg7+ Kf8 47.h6 with the threat of 48.Rh8 mate.
45.Rh7 Kg8 46.Rbg7+ 46.h6 followed by 47.Rbg7+ transposing moves also wins.
46...Kf8 47.h6 threatening 48.Rh8 mate.

Promoting a pawn

A further advanced passed pawn usually wins against additional pawns.



Position after 66.Ra3+
Black to move

White is a pawn ahead, but Black has the further advanced passed pawn which is one square from promoting.

White's king is trapped against the edge of the board by Black's rook.

Black's king can't make progress by playing 66...Ke2 67.Ra2+ Ke1 68.Ra1+.

66...Kf4 avoiding rook checks.

67.Ra8 Black wins after 67.Ra1 Re6! 68.Rf1 (68.Kg2 Re1 69.Rxe1 fxe1=Q) 68...Kf3 followed by 69...Re1 since White will have to give up the rook for the passed pawn.

67...Rg1 protecting the f1 promotion square. 67...f1=Q? 68.Rf8+ skewers the king and queen.

68.Rf8+ Ke3 69.b5 f1=Q 70.Rxf1 Rxf1 Black wins by stopping White's connected passed queenside pawns.

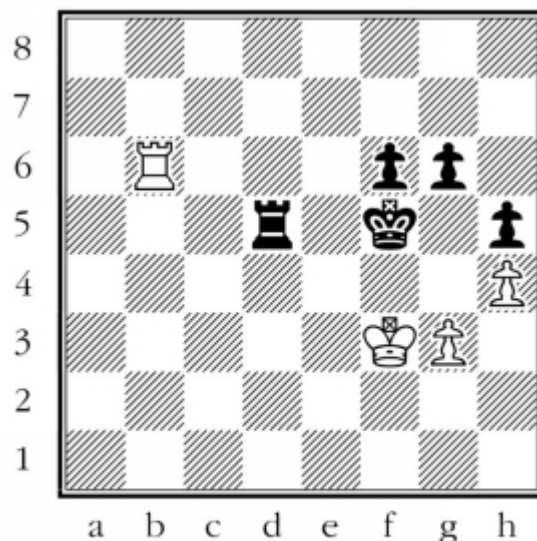
71.b6 Black wins White's pawns just in time after 71.c5 Rf5 72.c6 Rxb5 73.c7 Rc5. **71...Rb1 72.c5 Kd4** and Black can win White's pawns. Chasing the c-pawn with 72...Rc1? draws after 73.b7 Rb1 74.c6 Kf2 75.c7 Rg1 76.c8=Q Rg2+ 77.Kh1 Rg1+ 78.Kh2 Rg2+ repeating the position.

Extra pawn with pawns on the same side of the board

Rook and pawn endings with all the pawns on same side of the board are common and a material advantage of one pawn is often not enough to win, but accurate defense by the weak side is required to secure a draw.

The weak side should try to exchange pawns to achieve a drawn rook + pawn vs. rook endgame.

The strong side generally should try to achieve a strategic advantage when offering pawn exchanges.



Position after 44...Kf5
White to move

45.Ra6 a waiting move by White that keeps the f-pawn under attack.

45...Rd3+ 46.Kg2 g5 the only move that makes progress. **46...Kg4 47.Ra4+** forces Black's king to retreat.

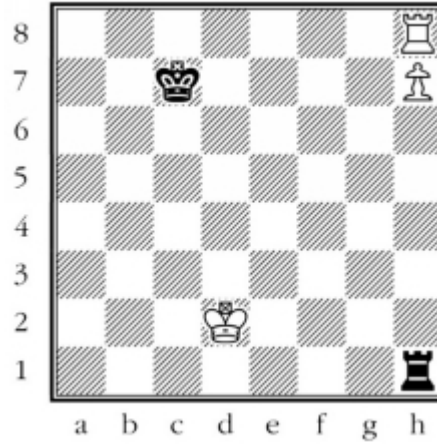
47.hxg5 fxg5 47...Kxg5 48.Ra5+ f5 49.Ra8. The weak side's rook is usually most effective checking from the rear. Black will not be able to make progress.

48.Ra5+ Kf6 49.Kf2 White leaves the rook on the 5th rank, cutting off Black's king. The burden of proof is on Black to win.

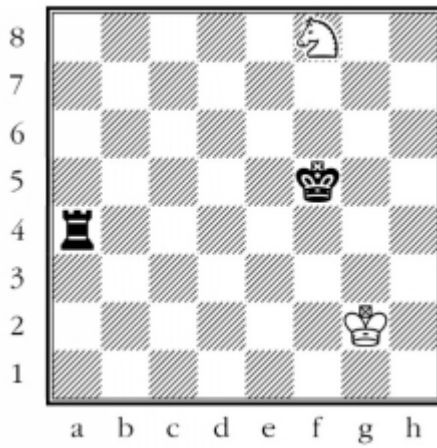
49...Rd6 50.Rb5 Re6 51.Kf3 Re5 offering a rook exchange and preparing to advance the king to f5.

52.Rb8 White's rook moves to check from the rear. White needs to keep the rooks on the board to keep drawing chances alive. A pawn exchange will result in an easily drawn rook and pawn vs. rook ending since White's king is in front of Black's pawns. Since Black cannot make progress, the game is drawn.

Basset Hound Problems



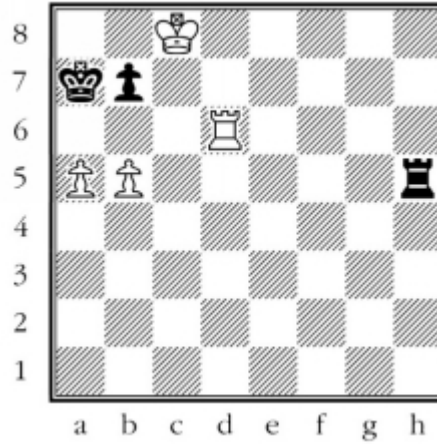
Position after 38.Kxd2 (p)
What is Black's best move?



Position after 45.Kxg2 (R)
What is Black's best move?



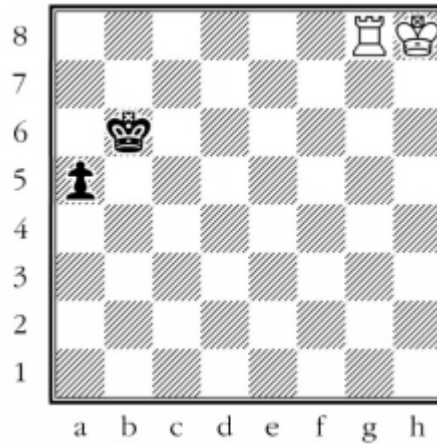
9-3



Position after 39...Rxf5 (p)
How does White force mate?



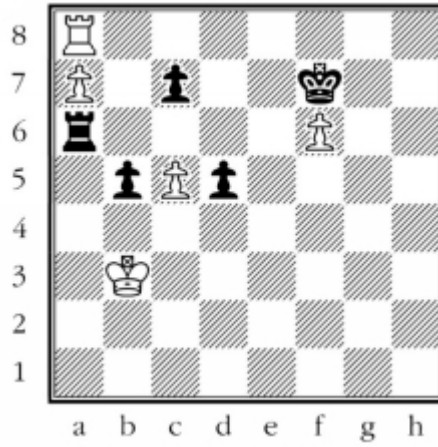
9-4



Position after 52...a5
How does White win the game?



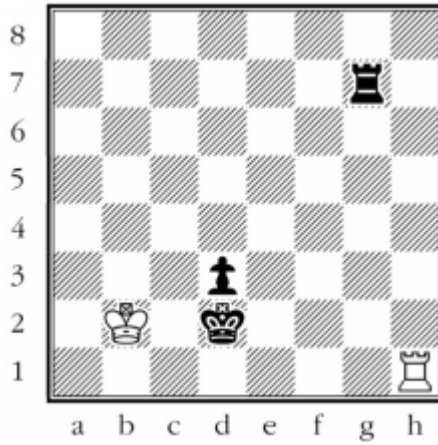
9-5



Position after 68...cxb5 (p)
 What is White's best move?



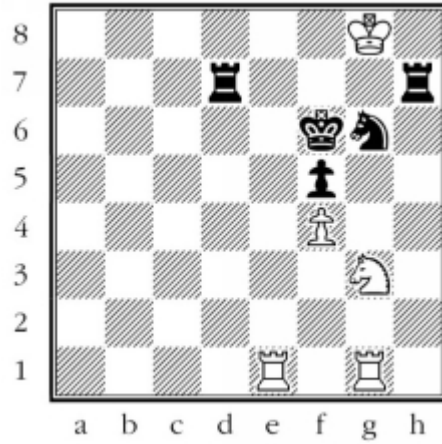
9-6



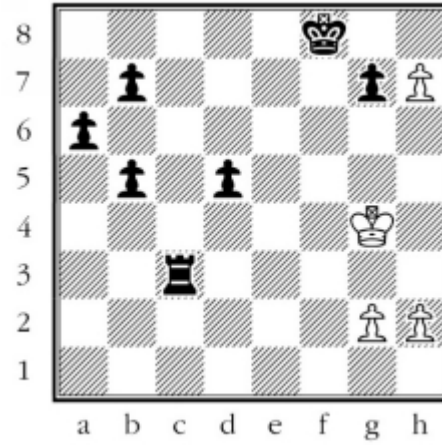
Position after 42...Kd2
 What is White's best move?



9-7

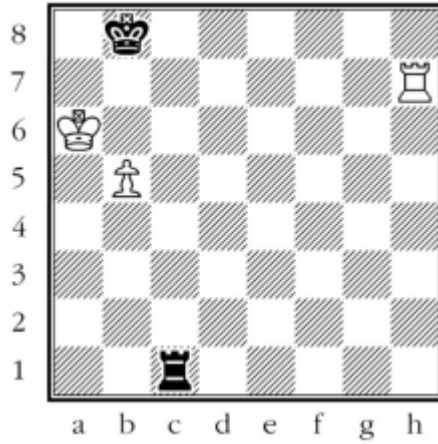


Position after 49...Kf6
 What is White's best move?



Position after 43.Kg4
 How does Black win the game?

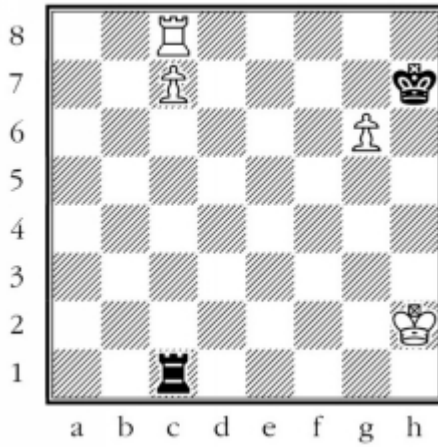




Position after 50.Ka6
How does Black draw the game?



9-10

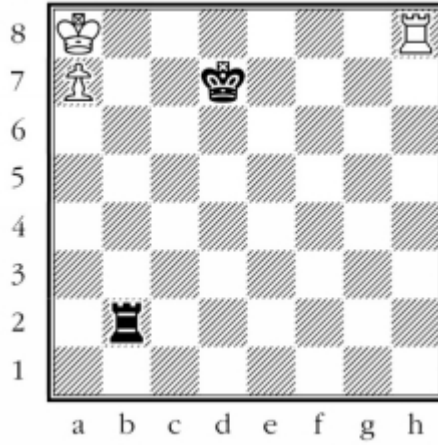


Position after 44.g6+
How does Black draw the game?

Chess Detective Problems



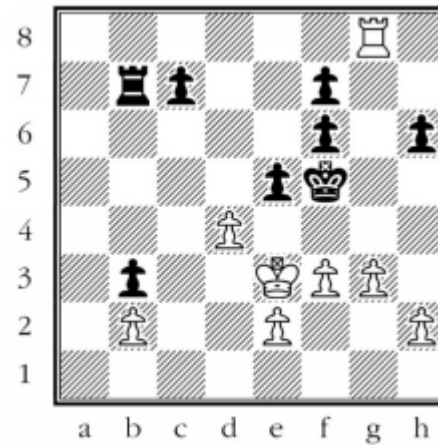
9-11



Position after 50.Ka8
What is Black's best move?



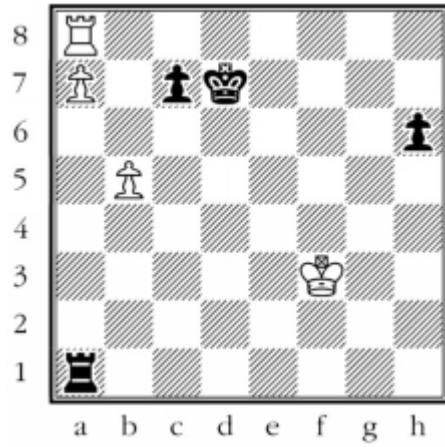
9-12



Position after 42...Kf5
What is White's best move?



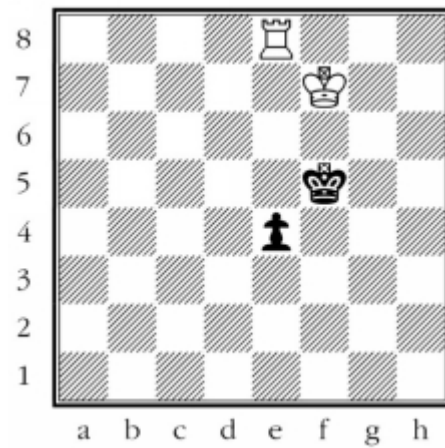
9-13



Position after 62...Ra1
How does White win the game?



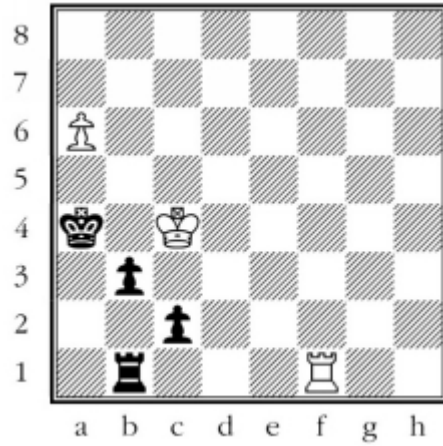
9-14



Position after 80...e4
What is White's best move?



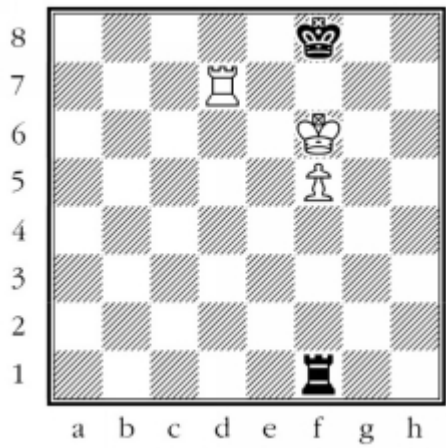
9-15



Position after 51...Rb1
How does White win the game?



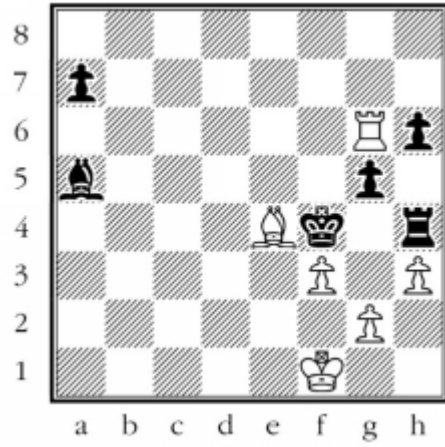
9-16



Position after 74.Rd7
What is Black's best move?



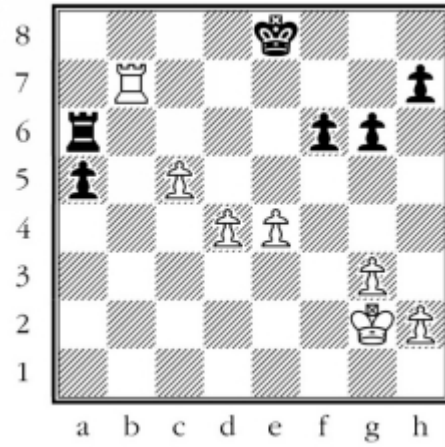
9-17



Position after 46...Bxa5 (p)
 What is White's best move?



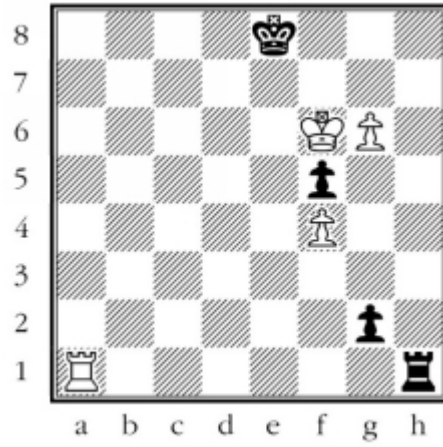
9-18



Position after 39...Ra6
 What is White's best move?



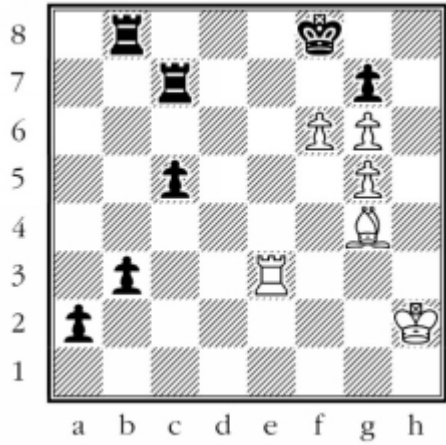
9-19



Position after 35...Rh1
 What is White's best move?



9-20



Position after 52...a2
 How does White win the game?

LESSON 10

QUEEN ENDINGS



“Endgames with queen and pawns on both sides are among the most difficult in chess.”

Paul Keres



Mating attacks and tactical combinations to win pieces and pawns are common in queen endings.

Queen checks are especially powerful when the enemy king is exposed.

Like most endings, the player who is ahead often needs to promote a pawn to win the game. During this process the strong side's king often needs to escape checks from the weak side's queen, who attempts to draw via perpetual check by threefold repetition.

Like other endings, in queen and pawn endgames the value of a further advanced pawn usually outweighs the number of pawns. The player who promotes first gains a huge advantage that usually wins the game.

The defending king should try to position himself in front of the passed pawn to prevent it from advancing, with the hope of winning the pawn.

In this lesson we will discuss queen vs. rook, pawn on the 7th rank vs. queen, mating attacks involving the queen, escaping checks from the opponent's queen, the queen as a poor blockader of pawns, and the power of two queens.

Queen vs. rook

Except for rare cases, this ending is theoretically winning for the side with the queen.

The strong side with the queen wants to force the opponent's king to the edge of the board to give checkmate or fork the king and rook with the queen to win the rook.

The defender generally strives to keep the rook near the king to avoid checks that win the rook via fork or skewer.

In practice the queen almost always wins, but the win is tricky and not easy against accurate defense. A mistake by the weak side with the rook often ends the game quickly.

Pawn on the 7th rank vs. queen

The result of the game often comes down to which player is first to promote a passed pawn. Often when one player promotes, the other player's pawn reaches the 7th rank with the king nearby to provide protection.

The player who promotes first has a clear advantage since the game is easily drawn by insufficient mating material if the queen chooses to sacrifice herself for the advanced pawn.

If the queen can reach a square in front of the pawn, all the strong side's king needs to do is approach the pawn to win it.

With correct play, the queen by herself will not be able to pry the defender's king far enough away from the pawn to win it; help from the king will be necessary.

To prevent the pawn from promoting, the queen has to continuously check the king or attack the promotion square when the king does not protect it.

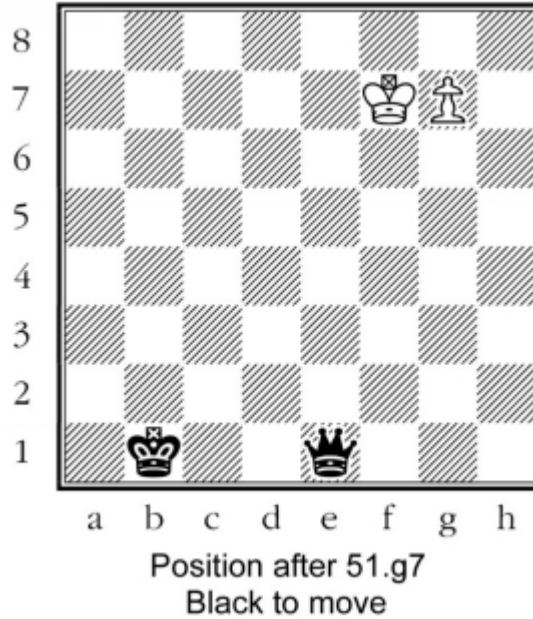
In order to gain a tempo to bring the king closer, the queen must force the weak side's king onto the promotion square, so the pawn cannot promote on the following move.

This is accomplished by checking the king from the rear. Checking from the side may allow the pawn to act as a shield from the checks while advancing toward the promotion square.

Splitting the board in half vertically between the d- and e-files, the board is symmetrical giving four unique cases: a pawn on a center file, bishop file, knight file, or rook file.

Center or knight pawn on 7th rank vs. queen

A center pawn or knight pawn on the 7th rank is a win for the queen.
We will group these cases together since the winning methodology is the same for both.



Black needs to force White's king to g8 with the queen in order to gain a tempo to bring the king closer to the pawn.

51...Qf2+ With White's king in check, the pawn cannot promote.

52.Ke7 Qe3+ Black's queen can zigzag up the board toward the pawn. Black could also play the non-checking move **52...Qg3**, attacking the pawn and the promotion square through the pawn, preventing a safe promotion of the pawn.

53.Kf7 Qf4+ 54.Ke7 Qg5+ 55.Kf7 Qf5+ 56.Ke7 Qg6 Black has achieved the goal of moving the queen to the square directly behind the pawn.

White is forced to play **57.Kf8** to protect the pawn.

57...Qf6+ 58.Kg8 This is the critical position where White's king blocks the pawn from promoting. Black can now move the king a square closer to the pawn.

58...Kc2 59.Kh7 59.Kh8 pins the pawn to the king and would allow Black's king to move another square closer.

59...Qh4+ Now the process starts over again. Another way to force Black's king in front of the pawn is **59...Qf7 60.Kh8 Qh5+ 61.Kg8**.

60.Kg6 Qg4+ 61.Kf7 61.Kf6 allows **61...Kd3** since White's king isn't protecting the promotion square.

61...Qf5+ 62.Ke7 Qg6 63.Kf8 Qf6+ 64.Kg8 This is the critical position where the king can move closer.
64...Kd3 65.Kh7 Qh4+ 66.Kg6 Qg4+ 67.Kh7 Qh5+ 68.Kg8 Ke4 69.Kf8 Qf5+ 70.Ke7 Qg6 71.Kf8 Qf6+ 72.Kg8 Kf5 73.Kh7 Qg6+ 74.Kh8 Qh6+ 75.Kg8 Kf6 76.Kf8 Qxg7+ 77.Ke8 Qe7 mate.

Logically any center or knight pawn on the 6th rank or further from the promotion square is also a winning for the strong side with queen.

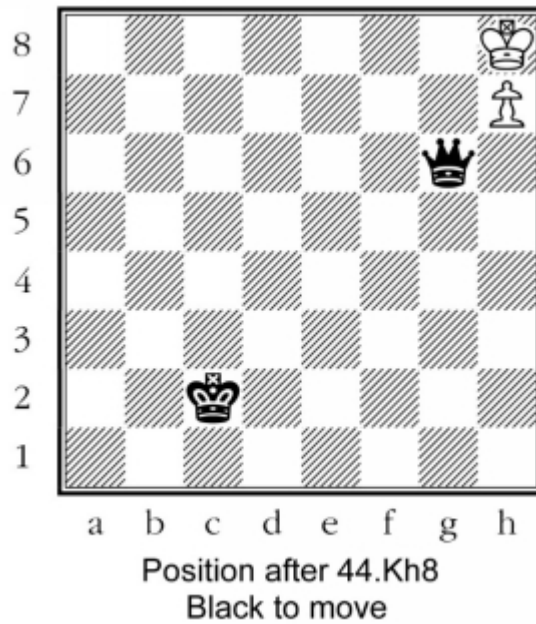
The strong side could begin by moving the king closer to the pawn, allowing the pawn to advance to the 7th rank, and then win with the method shown above.

A safer plan would be to apply the checking method above to force the king in front of the pawn when the pawn is not yet on the 7th rank because if a mistake is made allowing the pawn to advance, another opportunity exists to try again without the pawn promoting.

If the queen can safely move to a square on the file in front of the passed pawn, the strong side's king can march toward the pawn and win it.

Rook pawn on 7th rank vs. queen

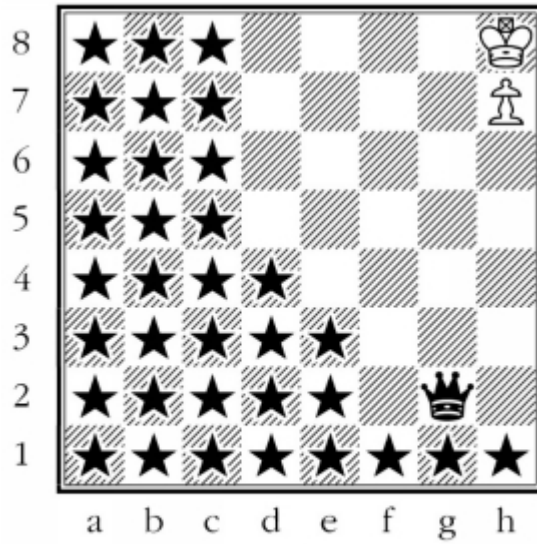
As with other endgames involving rook pawns, a rook pawn on the 7th rank vs. a queen often results in a draw by stalemate, unless the strong side's king is close enough to help checkmate the king after allowing the pawn to promote.



By checking from behind the pawn, this is the critical position where White's king is forced in front of the pawn.

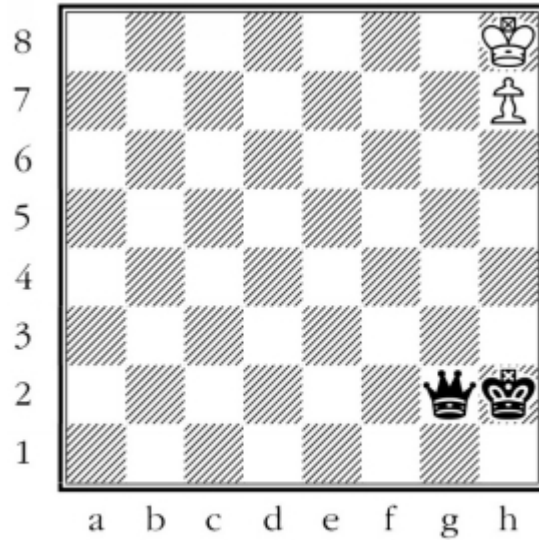
With the rook pawn on the 7th rank, Black's king cannot move toward the pawn because White's king would be stalemated in the corner.

Black would have to move the queen to allow White's king to move to g7 or g8 and won't be able to move the king any closer since the pawn would then be threatening to promote.



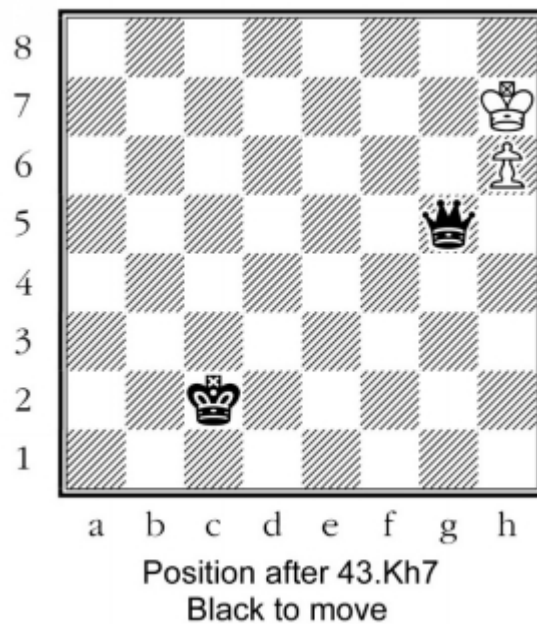
Position after 44.h7
Black to move

Black can win if it is his move and the king is on any of the open legal non-starred squares.
If Black's king is on any of the starred squares, the game is drawn.



Position after 44.h7
Black to move

Here is an example of how Black can win from the position in the previous diagram if Black's king is on h2.
44...Kg3! moving a square closer to White's pawn while blocking the queen on the g-file to prevent stalemate.
45.Kg7 Kf4+ 46.Kf7 46.Kh8 Kg5 moving closer while blocking the g-file to prevent stalemate.
46...Qb7+ 47.Kg8 Kf5 allowing the pawn to promote.
48.h8=Q Kg6 White will have to give up the new queen to avoid checkmate on the next move.



A rook pawn on the 6th rank (or further from the promotion square) is a win for the strong side with the queen.

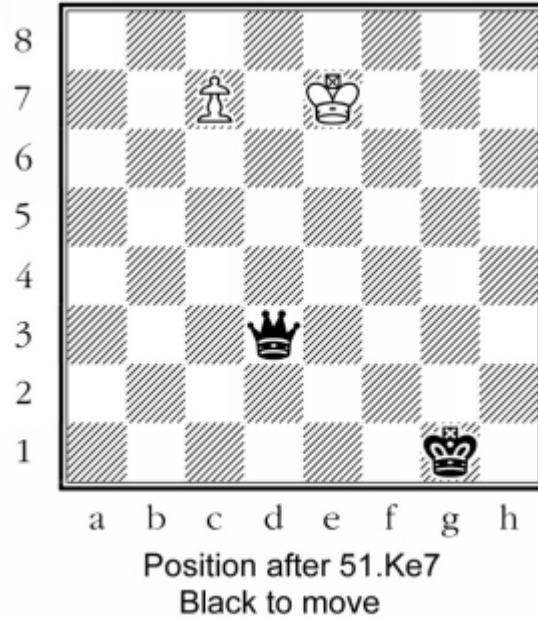
This is the critical position where White's king was forced in front of the pawn.

Black can play **43...Kd3** or any other king move.

White is in zugzwang and must play **44.Kh8** allowing Black to capture the pawn with **44...Qxh6+**.

Bishop pawn on 7th rank vs. queen

Like a rook pawn on the 7th rank, a bishop pawn on the 7th rank vs. a queen is also a draw due to stalemate, provided the strong side's king is far away from the pawn.



Black's queen zigzags toward the pawn starting with **51...Qc4**.

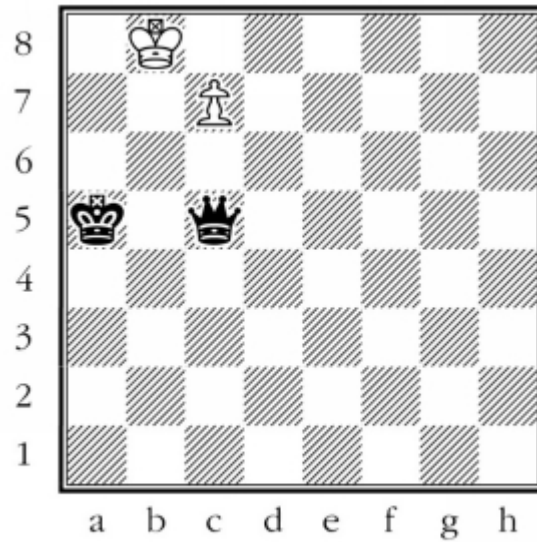
52.Kd7 Qd5+ 53.Ke7 Qc6 moving directly behind the pawn.

54.Kd8 Qd6+ 55.Kc8 This is the critical position where Black's king can move a square closer.

55...Kf2 56.Kb7 Qb4+ 57.Ka7 Qc5+ 58.Kb7 Qb5+ 59.Ka7 Qc6 60.Kb8 Qb6+.

61.Ka8! Black cannot capture the pawn with **61...Qxc7** due to stalemate.

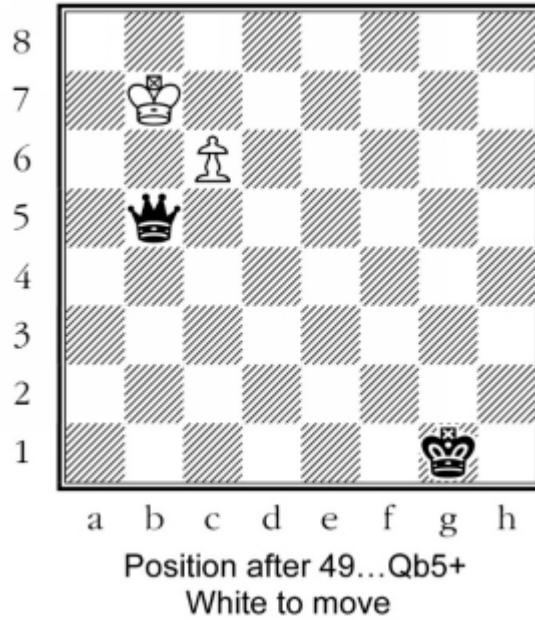
Since White can safely promote the pawn if Black's king moves a square closer, the game is drawn.



Position after 45.c7
Black to move

If Black's king is close to the pawn, Black can allow it to promote and then checkmate White's king since the king is trapped on the edge of the board.
 Among other moves, Black can win with **45...Kb6 46.c8=Q 46.c8=N+ Ka6** and White will lose the knight on the next move and soon be checkmated.
46...Qe5+ 47.Ka8 Qa5+ 48.Kb8 Qa7 mate.

Except in rare situations where the strong side's king blocks the queen on a critical file or diagonal, a bishop pawn on the 6th rank is a win for the strong side with the queen since stalemate won't be a factor.



Here is a position with the bishop pawn on the 6th rank, where it was previously on the 7th rank.

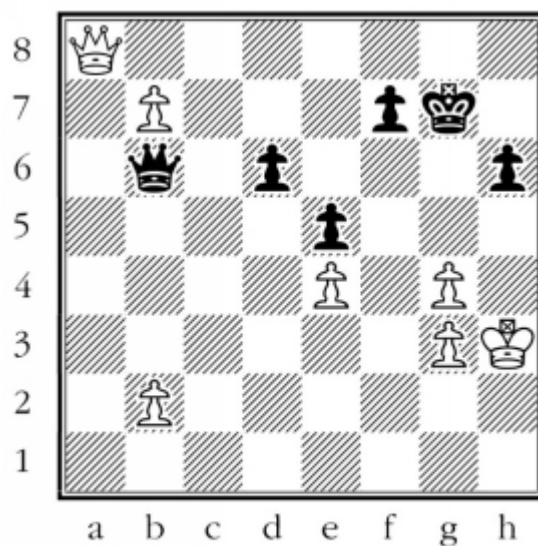
50.Ka7 Qxc6 is not stalemate like when the bishop pawn was on the 7th rank.

White's king is forced to move to c7 to protect the pawn and Black's king can take a step closer.

Black will eventually win utilizing the same method to retreat the king previously discussed in the case with the center and knight pawns.

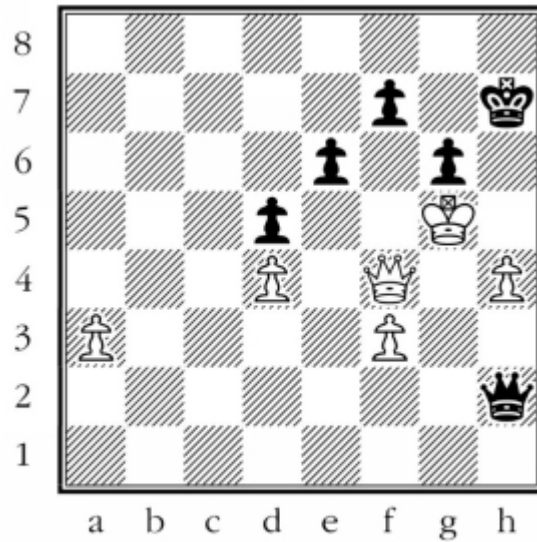
Checkmating with a queen

The players often have mating opportunities in queen endings before pawns promote. If a queen can't checkmate the king, she can sometimes force a threefold repetition by perpetual check. The queen sometimes has to abandon protection of her king to help a passed pawn promote.



Position after 38.Qa8
Black to move

White is threatening to promote the b-pawn to get a second queen.
Black plays **38...Qg1!** threatening 39...Qh1 mate.
39.g5 Qh1+ 40.Kg4 h5+ 41.Kf5 Qf3 mate.



Position after 33.Qf4
Black to move

White wins the game with a queen trade due to the outside passed pawn on a3.

Unfortunately, White's king is in danger on Black's side of the board.

33...f6+! **34.Kg4** White's king can't take the pawn since the queen would be unprotected and if **34.Qxf6**, then **34...Qg3** mate.

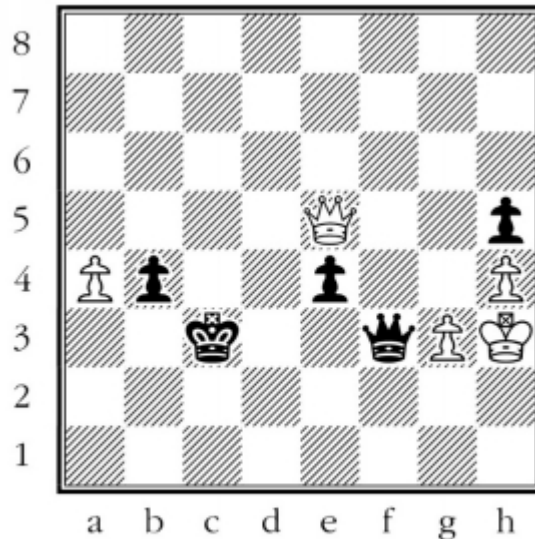
34...Qg2+ **35.Qg3** **f5+** **36.Kf4** **e5+**! trying to pry White's king away from protecting the queen.

37.dxe5 **37.Kxe5** **Qxg3+** wins White's queen.

37...Qd2 mate.

Escaping checks

The player with the advantage often has to promote a pawn to seal the victory.
Since threefold repetition by perpetual check is usually the drawing mechanism used by the defender, escaping or avoiding the annoying checks is often a goal of the strong side.
Further advanced passed pawns usually win against less advanced pawns.
Often the player with further advanced passed pawns wins against an opponent with more pawns.



Position after 82.Qe5+
Black to move

Black's pawns are further advanced than White's.

82...Kb3 Black's king seeks shelter on the queenside to hide from checks from White's queen.

83.Qd5+ Ka3 Black leaves White's pawn on a4 to provide shelter from checks on the a-file.

84.Kh2 to prevent 84...Qh1 mate.

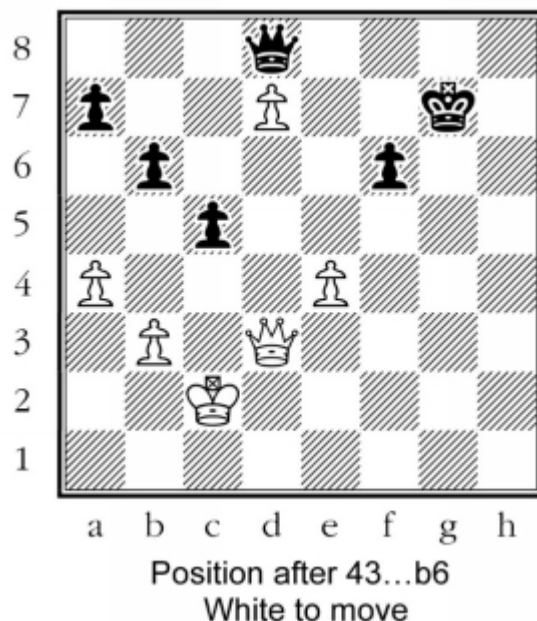
84...b3 84...Qf2+ 85.Kh3 Qf1+ 86.Kh2 e3 is also winning.

85.Qc5+ Ka2 86.a5 White would like to promote the a-pawn.

86...b2 87.Qd5+ Qb3 88.Qd2 Qd3 89.Qf2 e3 90.Qf7+ Qb3 White is out of safe checks and Black's b-pawn can promote.

Queens as a poor blockader

The queen should be as active as possible. She is too valuable to be stuck in front of a passed pawn which reduces her mobility and chance to force a perpetual check.



Black's queen has limited mobility since she is blocking White's passed pawn on d7.

White centralizes the king with **44.Kc3**.

44...Kf7 45.Qd6 preventing Black's king from moving to e7 to attack the d7 pawn. Black's queen only has time to move off the promotion square when she checks White's king.

45...Kg7 46.Kc4 Kf7 47.Kd5 White's king invades Black's side of the board.

47...Qa8+ 48.Qc6 White is willing to trade queens and go into a winning king and pawn ending.

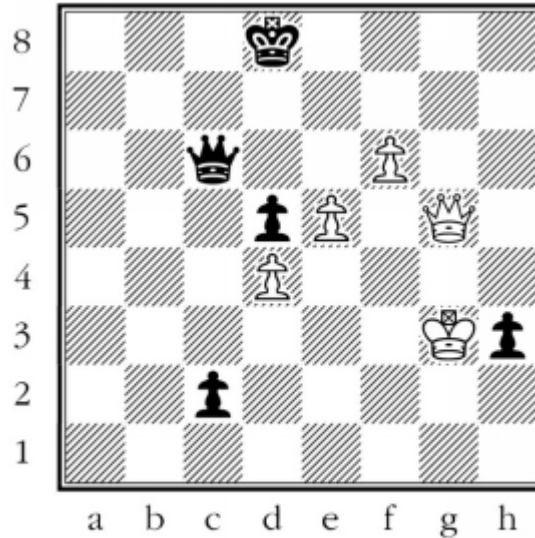
48...Qd8 49.Qe6+ Kf8 50.Kd6 Qb8+ 51.Kc6 Qd8 52.Qd6+ Other moves are also winning.

52...Kf7 53.Qc7 Ke7 54.Qxa7 Ke6 55.Qc7 White offers a queen trade to simplify the position and promote the pawn while also threatening to win Black's queenside pawns.

Power of two queens

The first player to promote a pawn to acquire a second queen has the advantage of two queens against one.

An exposed king has little chance to escape an attack from two queens or even one queen and a rook. The king is usually checkmated quickly by the queens with a series of forcing checks.



Position after 54...c2

White to move

Both players are racing to promote their advanced passed pawns.

White has the advantage by virtue of being on the move.

55.f7+ Kc7 56.f8=Q promoting first.

56...Qc3+ 56...c1=Q 57.Qgd8+ Kb7 58.Qa8+ Kb6 59.Qfb8+ Qb7 60.Qxb7 mate.

57.Kh2 moving to a square where Black has no safe checks.

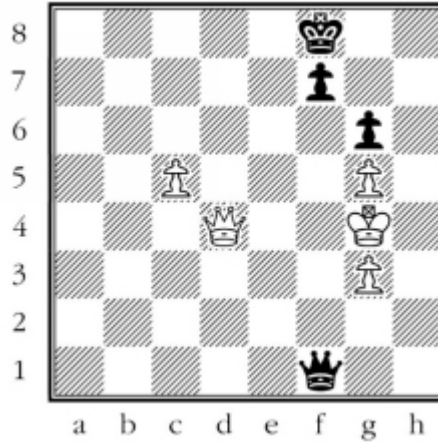
57...c1=Q 58.Qgd8+ White also wins with **58.Qge7+ Kb6 (58...Kc6 59.Qfe8+ Kb6 60.Qb8+ Kc6 61.Qed6 mate) 59.Qb8+ Ka5 60.Qea7 mate.**

58...Kc6 59.Qfe8+ Kb7 60.Qb5+ Ka7 61.Qdb8 mate.

Basset Hound Problems



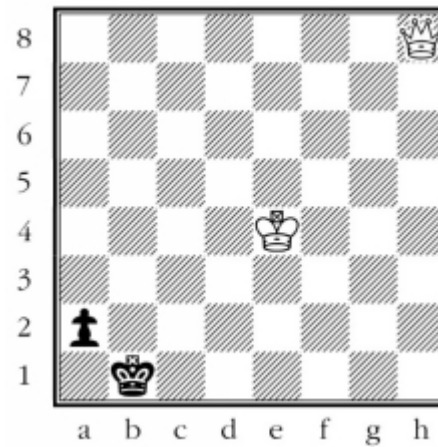
10-1



Position after 59.Kg4
What is Black's best move?



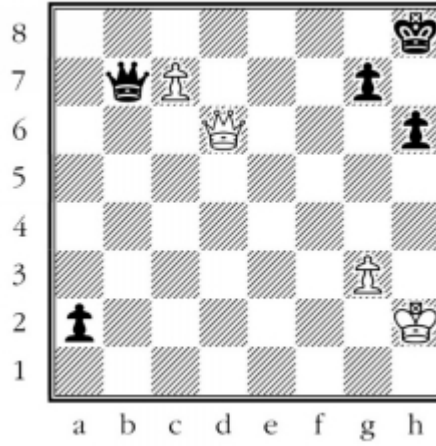
10-2



Position after 46...Kb1
How does White win the game?



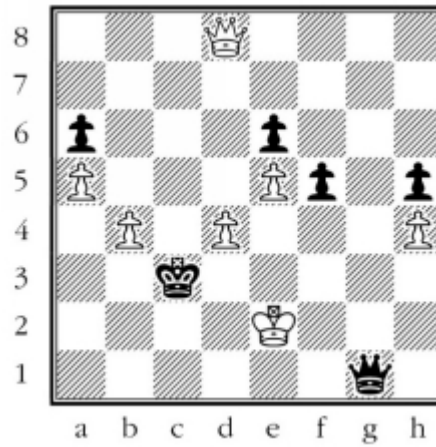
10-3



Position after 60...a2
What is White's best move?



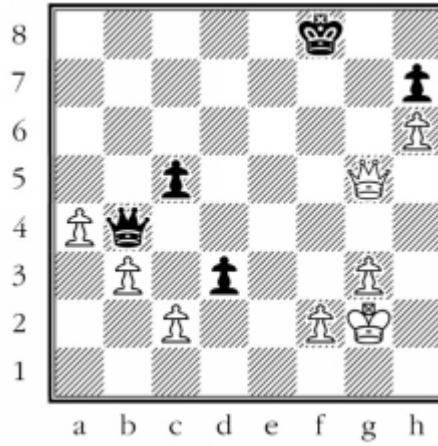
10-4



Position after 60.Ke2
How does Black win the game?



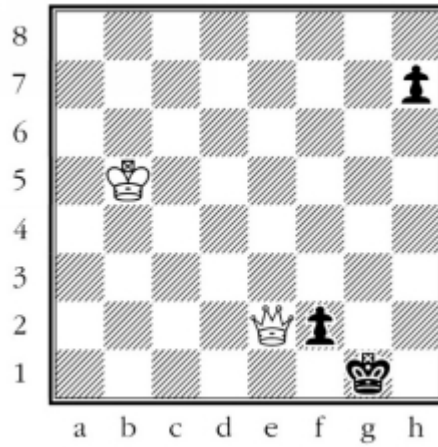
10-5



Position after 48...d3
 What is White's best way to win?



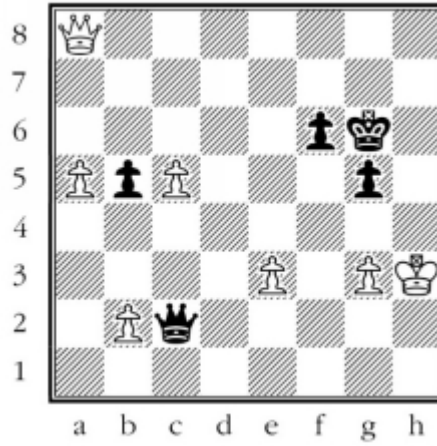
10-6



Position after 50...Kg1
 How does White win the game?



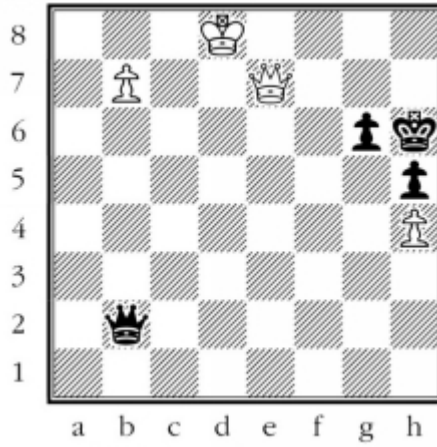
10-7



Position after 65.Kh3
How does Black force mate?



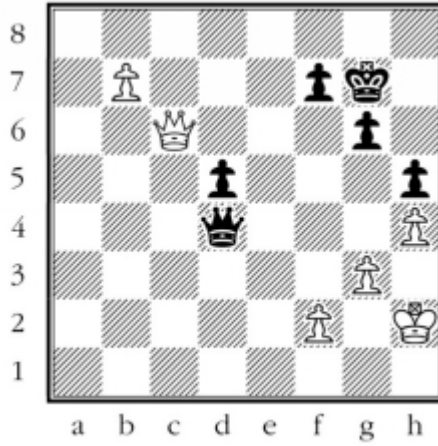
10-8



Position after 105...Qb2
What is White's best move?



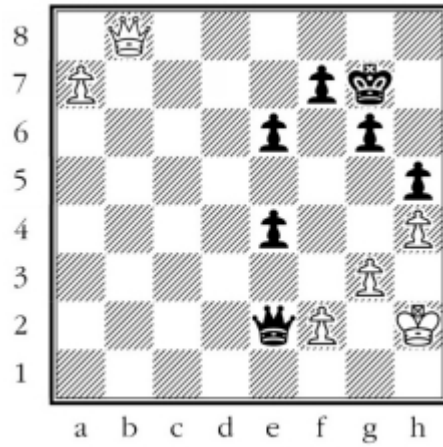
10-9



Position after 35...Qd4
What is White's best move?



10-10

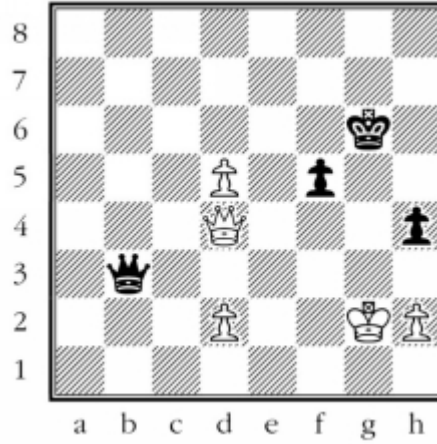


Position after 48...Qe2
What is White's best move?

Chess Detective Problems



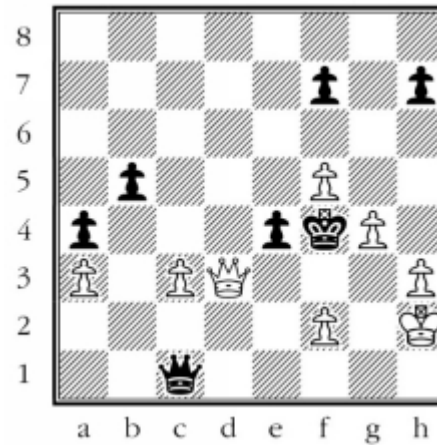
10-11



Position after 51...Qb3
What is White's best move?



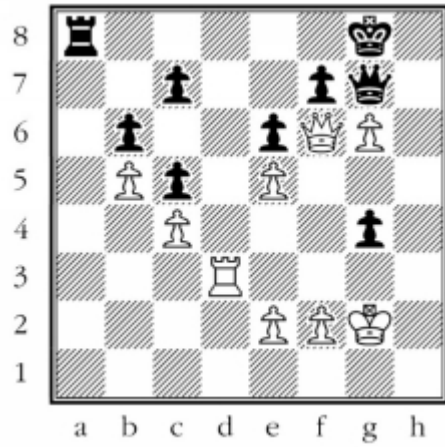
10-12



Position after 40...e4
What is White's best move?



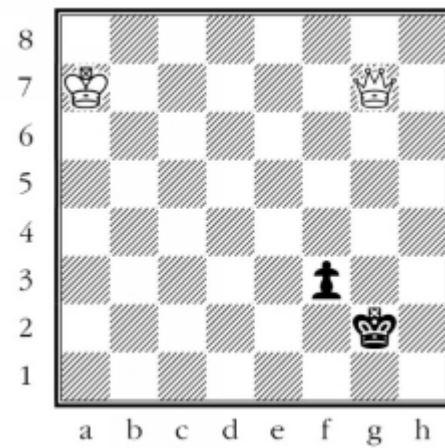
10-13



Position after 32...Qg7
What is White's best continuation?



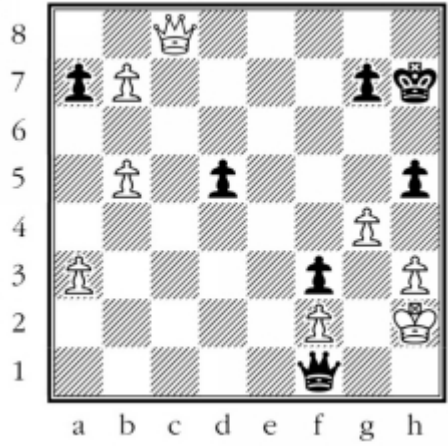
10-14



Position after 46.Qg7+
What is Black's best move?



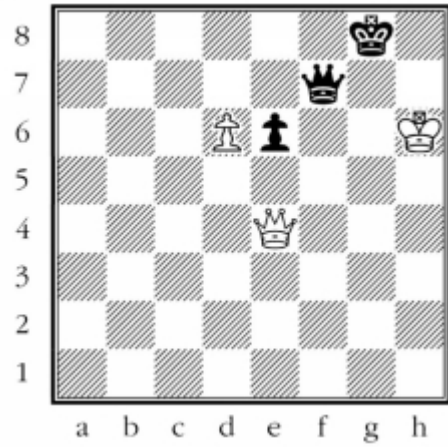
10-15



Position after 40...Qf1
 What is White's best move?



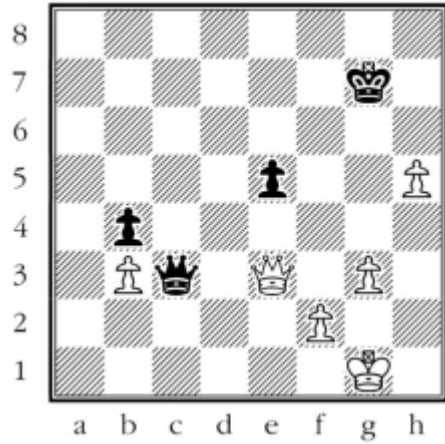
10-16



Position after 50...Qf7
 What is White's best move?



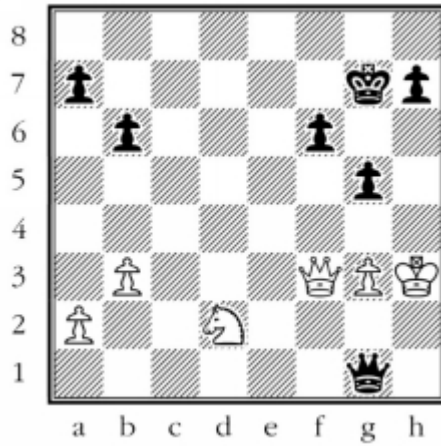
10-17



Position after 56...Qc3
 What is White's best move?



10-18



Position after 43.Qf3
 What is Black's best move?



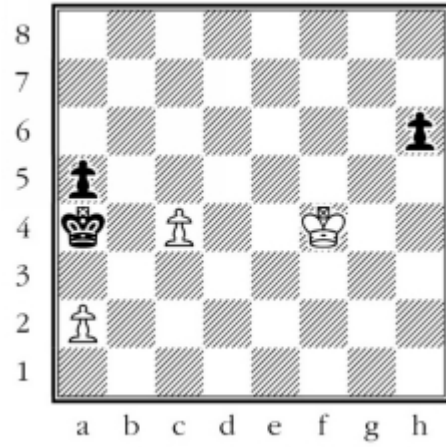
10-19



Position after 29...Qe7
 What is White's best move?



10-20



Position after 53...a5
 What is White's best move?

APPENDIX A
GUIDELINES AND GENERAL PRINCIPLES



"I keep on fighting as long as my opponent can make a mistake."

Emanuel Lasker

Endgame Guidelines and General Principles

Start thinking about the endgame in the middlegame.

Determine if you are playing for a win or for a draw. Also, try to figure out what outcome your opponent is playing for and play accordingly.

If you are losing, look for ways to at least obtain a draw. These include eliminating your opponent's pawns to draw by insufficient mating material, stalemating yourself, perpetually checking your opponent, or building a fortress to keep your opponent from making progress.

When you find a variation that draws, spend time looking for a variation that wins.

When you obtain a winning endgame position, keep in mind that your opponent is desperate and will try for complications to make your job more difficult.

Normally two queens are more than enough to win the game. More queens can complicate the position because the risk of stalemate increases; keep it simple!

Don't be overconfident. The player who makes the last mistake often loses the game.

Don't resign! Once you resign, you lost and cannot come back. Your opponent could stalemate you or make a terrible blunder if the game is still in progress. Make your opponent prove that they know how to win the game.

Look for opportunities to zugzwang your opponent. Avoid letting your opponent put you in zugzwang.

Be the first player to activate or centralize the king. The player with the better king position often wins.

Spend extra time to deeply and accurately count out pawn races to promote.

When your opponent is low on time and you are not, don't rush your moves and try to win on time; be patient and use your time efficiently. Try to complicate the position to increase the odds that your opponent might make a mistake.

When you are ahead in material, look to trade pieces to simplify the position and try to avoid exchanging pawns which have the potential to become queens in the future.

When you are behind in material, complicate the position and make it more difficult for your opponent to win. Try to eliminate all your opponent's pawns with the goal of leaving insufficient mating material of a knight or bishop.

Determine who has the advantage in the king and pawn ending before trading pieces.

Analyze forcing moves and exchange lines first.

Don't underestimate active piece play. Mobilize your pieces while restricting the mobilization of your opponent's pieces. This is especially important with the king.

Continuously be aware of how both you and your opponent can make progress.

Small advantages often add up to be large enough to win the game.

Don't waste moves or give pointless checks; every tempo in the endgame may be critical.

Create threats on both sides of the board in an attempt to overload your opponent's pieces with defensive tasks.

Pawns

When one side has a material advantage, an extra pawn is often enough to win the game.

If you have the advantage, try to leave pawns on both sides of the board.

When possible, maintain a reserve of pawn moves to put your opponent in zugzwang or to avoid your opponent putting you in zugzwang.

Win your opponent's weak pawns, don't trade for them.

Since you can't undo or reverse a pawn move, don't make pawn moves that create structural weaknesses.

Mobilize a pawn majority by typically pushing the unopposed pawn first. Don't let your opponent's pawn minority block your pawn majority and freeze them.

It is easier to draw against rook pawns because of stalemate possibilities in the corner.

Pawns are more dangerous when they are further advanced but can also be more vulnerable in enemy territory.

Attack your opponent's weak pawns, forcing your opponent's pieces into passive positions to defend them.

Weak pawns are typically exploited by attacking them with the king. The success of such an attack depends on the ability of the king to penetrate the defense.

Try to block or immobilize your opponent's pawn storms.

Sometimes it is good to sacrifice a weak pawn to disrupt the enemy pawn position or activate one of your pieces.

Look for opportunities to sacrifice a pawn at the right moment to either promote a different pawn by force, gain additional pawns when the defending king is forced to chase the decoyed pawn, divert your opponent's defending piece, or reach an easily winning king and pawn ending.

Pawns gain in value relative to minor pieces in the endgame since they have promotion potential.

Promoting a pawn with check often gains an important tempo that can win the game.

The player who promotes first has the advantage of the first opportunity to check the opponent's king or win material with the queen.

Sometimes underpromoting a pawn is better than promoting to a queen. In certain positions promoting to a queen will result in an immediate stalemate. In this case, underpromotion to a rook may still give you a large enough material advantage to win the game. Sometimes underpromoting to a knight is best since the knight has different powers than the queen.

In general, the mobility of pawns and how far they are advanced on the board is more important than how many pawns there are. Quality is more important than quantity.

Try to achieve a superior pawn structure; an outside passed pawn, a protected passed pawn, better quality passed pawns (connected or closer to the promotion square), or force a weakness in your opponent's pawn structure like doubled isolated pawns.

Advance your pawns in an attempt to create a passed pawn.

Push passed pawns, supported by pieces.

You should generally advance on the side of the board where you have more pawns (a pawn majority), with the goal of creating a passed pawn.

Stop your opponent's passed pawns and try to prevent them from being created.

Carefully examine all pawn choices: moving, sitting, and capturing for both players.

Symmetrical pawn structures tend to be more drawish than asymmetrical pawn structures because it is harder to create passed pawns when an opposing pawn blocks the file.

Look for ways to clear a path for your passed pawns to promote. Block your opponent's pieces that are trying to stop your passed pawns.

Look for opportunities to sacrifice pieces to create passed pawns, especially when you can promote them. A pawn that can be promoted to a queen is more valuable than the piece sacrificed (other than a queen) to create the passed pawn.

Passed pawns near the edge of the board are generally superior to central passed pawns because the opponent's pieces or king have to travel a greater distance to capture them.

It is generally best to block your opponent's passed pawns with the king or minor pieces, not the more valuable rooks or queen.

With the same number of pawns on the board, an outside passed pawn, with the defending king in the square of the pawn, is usually at a disadvantage to a protected passed pawn. It takes time for the defending king to capture the outside passed pawn, but that player has the extra time since the opponent's king can't capture the protected passed pawn.

Connected passed pawns should generally be kept side by side or on adjacent ranks as the enemy king approaches. When they are on adjacent ranks, they are in a sense self-protecting because it is illegal for the enemy king to capture the front pawn since it would place him in check and capturing the trailing pawn results in leaving the square of the front pawn which can now outrun the king to the promotion square.

Unconnected passed pawns are often most dangerous when they are further apart, making it more difficult for the defending king to stay in the square of both pawns.

King

Centralize your king; get him close to the action. He is a valuable fighting piece in the endgame once it is safe for him to move toward the center.

Centralized kings are superior to kings on the edge of the board due to mating attack vulnerability; it is more difficult to checkmate the king in the middle of the board since he has more squares available to him.

Cut off your opponent's king from the action when you can.

Create a path for your king to invade your opponent's territory; try to prevent your opponent's king from invading your territory.

Move your king close to vital pawns and use him to support your passed pawns or penetrate your opponent's pawn position.

Moving your king diagonally allows him to move a square in two directions simultaneously.

Look for opportunities to outflank your opponent's king.

When it is your move in a position where your opponent would be zugzwang if it were their turn, look for ways to triangulate to lose a move.

The attacking value of the king is about four pawns, more than the value of a knight or bishop, but less than a rook.

Kings are good blockaders. As a defensive piece, it is important that the king stay in the square of enemy pawns.

As an offensive piece, the king is good at capturing pawns and escorting friendly pawns to their promotion squares. Once a king reaches enemy pawns, he may win several nearby pawns.

To have the direct opposition, the kings must be one square apart. To have the distant opposition, the kings must be an odd number of squares apart. The opponent of the player to move has the opposition. This includes the diagonal opposition. You generally want to have the opposition.

Minor Piece Endings

The weak side can sometimes sacrifice a minor piece for the opponent's last pawn to draw by insufficient mating material.

Knights are good blockaders of pawns because they can attack the squares where enemy pawns can protect the blocked pawn.

Because they are short-range pieces, it is more important to centralize knights than other pieces.

Zugzwang more frequently affect knights than bishops.

Knights are generally better than bishops when the pawns of the player with the bishop are blocked on the same color as the bishop.

A king, bishop, and rook pawn vs. king is a draw if the bishop is not on the same color of the pawn's promotion square (a "wrong-colored bishop") and the defending king can get in front of the pawn. The weak side's king can hide in the corner on the promotion square where he may be stalemated, but not checked or checkmated.

When you have a bishop, try to place your pawns on the squares opposite the color of your bishop so the bishop isn't restricted. This also helps you control the colored squares your bishop can't attack or defend.

A bishop is generally more value than a knight in pawn promotion races because a bishop can often perform both offensive and defensive duties at the same time, while the knight is usually only capable of one or the other.

The bishop is generally better than the knight with pawns on both sides of the board; the knight is better with pawns on only one side of the board.

Bishops like open diagonals and unblocked pawns that are free to advance.

Bishops are good at preventing enemy pawns on the same diagonal from advancing without being a victim of zugzwang.

In bishop vs. knight endings, zugzwang is a common method of defeating a blockade where the opponent has no good moves. A goal of the side with the bishop is to advance the king as far as possible and then trap the knight with the bishop.

Opposite-colored bishop endings tend to give the weak side good drawing chances because of the ability to blockade the opponent's passed pawns on the color of the defender's bishop in an attempt to prevent a pawn promotion.

With pawns on the board (which is usually the case), the bishop pair is more powerful in open positions and generally superior to two knights or bishop and knight. The bishop pair is effective defending against connected passed pawns and can also control each square along a file to help a passed pawn promote.

Rook Endings

Rooks generally belong behind passed pawns of either player.

A rook on the 7th rank is generally considered to be worth a pawn since it attacks enemy pawns that haven't moved, and can prevent the enemy king from leaving the back rank to enter the battle.

In rook and pawn endgames, you should strive to attain a better king position, more active rook, and better pawn structure that you can convert to a material advantage or use to promote a pawn.

Unlike most minor piece endings, rook endings sometimes end in checkmate without pawns promoting.

Use your king to block your opponent's passed pawns so your rook can stay mobile.

Activate your rook and keep it active.

Rooks are good at cutting off the opponent's king.

The weak side often draws by continuously checking the opponent's king to prevent progress from being made.

Look to achieve the Lucena position when you are ahead and the Philidor position when you are behind.

Rook vs. pawn endings usually occur in a pawn race to promote to a queen when one side has to sacrifice the rook to prevent the enemy pawn from promoting or for the new queen after the promotion.

Without pawns on the board, rook vs. minor piece and rook and minor piece vs. rook are usually theoretically drawn, but achieving a draw can be difficult for the weak side.

Two rooks on the 7th usually dominate due to rook-rook roler mate threats.

A pawn advantage with all the pawns on the same side of the board in rook endings is often not enough to win, but accurate defense is required. The weak side generally should avoid moving pawns since this may allow the enemy rook to attack from behind.

Queen Endings

Theoretically a queen vs. rook ending can be a difficult win for the queen. In practice, the queen usually wins since the defender has a tough time avoiding forks and mate threats.

The queen is so powerful, tactics can dominate queen endings. Mating attacks and combinations to win pieces are common. King safety is paramount.

In positions where the players are racing to create a second queen, the player who promotes first usually wins due the power of two queens.

In queen endings, look for perpetual checks or threefold repetition draws from the player who losing.

Queens are good at escorting passed pawns against the enemy queen.

In queen endings the defending king is generally best placed in front of a passed pawn with the hope of winning the pawn.

Queens generally make poor blockaders of pawns since this reduces the power of the queen and decreases the chance for perpetual check. The defender's queen should be placed as actively as possible. Do not allow your best offensive piece to be forced to defend.

APPENDIX B
HOW TO THINK



*“Chess is a matter of delicate judgment,
knowing when to punch and how to duck.”*

Bobby Fischer

Thinking during the game

There are two separate times where you need to have an ordered thinking plan – when it is your move and when it is your opponent’s move. Below is a recipe based on Kotov’s classic chess book, “Think Like a Grandmaster.”

On your move, Part A, your opponent just made their move and started your clock. Your thoughts should turn more to tactics at this time. This is when you are required to do brute force analysis and calculate different variations.

On your opponent’s move, Part B, your thoughts should be more about picking up clues in the position and working on a strategy based on your observations.

Of course, this process goes back and forth with each move. By following this simple recipe, your thoughts will be logical and well-organized. You will realize that this thought process overlaps thought processes that you use in other areas of your life to make decisions and will serve you well in your chess career.

Part A: Your Move

Here are the steps you should follow when it is your move:

1. Write down opponent's move

This is a quick, easy step. Although there is a tendency to look at what your opponent's move does first, always write it down immediately, so you don't forget, skip a move, and mess up your score sheet.

2. Ask, "What is he threatening?"

Pretend that you are your opponent and figure out what he is trying to do to you. When a master plays chess, he is actually playing against himself, looking for the best move for each player, analyzing as deeply as he can. Of course, your opponent can threaten more than one thing with their move. So after you have answered this question, ask, "**What else is he threatening?**" Answer this question, and repeat the process until you have all the threats.

This is a time-consuming step.

3. Determine your "Candidate Moves"

Candidate moves are moves that make sense before you analyze them. Think of candidate moves as moves that are on your "wish list" to make.

There are normally around thirty to forty legal moves in middlegame positions, with fewer in the endgame. Of those, maybe five or six are candidate moves. A master cannot calculate fast enough to look at every single move like a computer can, so he focuses only on the candidate moves. You will have feelings toward your candidate moves – some will seem reasonable and some may seem a little crazy (but these moves might work and also need to be examined). Your goal is to identify the candidate moves in this step – you will analyze them later. Most chess players see a move they like and then try to prove to themselves that it is the correct move to make. The move is only a candidate move at this point.

Here are some examples of types of candidate moves:

- capture and recapture moves - it doesn't matter if you are trading a piece or a pawn
- all sacrifices and checks, if one of the kings is exposed
- advancing a passed pawn
- improving a piece's position to a better square
- ideas based on your observations from Part B: Your Opponent's Move

Determining your candidate moves is a quick step.

4. Thoroughly analyze all candidate moves

This is the step that will use most of your brain power and will take the longest amount of time.

You must now systematically analyze each of your candidate moves, with the goal of finding the best move. This is a time management problem.

Remember that you will have feelings toward each of your candidate moves. In this step, you must look at them logically, without regard to your feelings.

It is okay to take a quick look at each candidate before you decide which order to analyze them in. This gives you the big picture of what you are looking at. If one of the moves is complicated, you may want to save

it for last. If you start with the most complex candidate move first, you may end up wasting your time, especially if one of the simpler ones leads to an obvious advantage.

Usually, you should start with the candidate move you feel is best. As your chess skills and judgment improve, the odds are greater that this will end up being your best move. The idea here is that it gives you a standard to raise the other candidate moves to and may save you some time.

Go through each candidate move carefully, looking at all the branches of the analysis tree that your abilities will allow. The trunk of the tree is the main line you are considering. A long series of captures can form the main trunk of the tree. Your opponent's reasonable replies form the main branches of the analysis tree. Your possible responses to each of these form the next branches, and so on. After you finish one of the candidate moves, move on to the next one. Don't re-analyze it again – unless you either have lots of time remaining on your clock or discover a tactic that you didn't notice in a variation you have already completed.

As you analyze each branch of the tree, you will have to continually go back to the first move and re-trace your steps through the main branches. Each time you move along the main branches to check out the smaller branches of the tree, the resulting positions should become clearer in your mind.

If you are short of time or playing a game with a fast time control, you will need to scale back on your analysis and go through this process more quickly, which, of course, increases the chances of making a mistake.

5. **Apply Blumenfeld's Rule**

Think of all the chess games that you have ever lost. I'll bet that well over half of them were because you made a really bad move that, in hindsight, was an obvious blunder.

Wouldn't it be great if you could eliminate serious blunders from your game for the rest of your life?! Here is how you can do this:

After you have determined your best move from Step 4, do not make it. Write it very carefully and clearly down on your score sheet, hiding it from your opponent's eyes with your hand. Then cover the move with your pen. With fresh eyes, double check the move, looking for obvious blunders.

Kotov calls this step *Blumenfeld's Rule*. Blumenfeld was a Russian master who was frustrated that he sometimes made obvious blunders and claimed that the same thing happened to the world's best players. Blumenfeld wrote a postgraduate thesis on the psychological aspects of chess. Most grandmasters follow Blumenfeld's Rule. If *they* think it is useful for them, it sure is necessary for the rest of us!

If your move is okay after you double check it, make it. If not, go back to step 4.

Part B: Your Opponent's Move

This is the time you can relax, take a step back, and look at the big picture. If you need to, this is the time to go to the bathroom. You now have time to get up and walk around to clear your head.

Now is the time to look at the entire board and figure out what each player should be trying to do. Be observant and pick up clues in the position. Look at the forest, not the trees. This is the time to work out your strategy and figure out what your opponent's strategy is.

To get a fresh perspective on the game, some players actually stand behind their opponent and look at the board from their perspective. Give it a try and see if it works for you. Personally, I get dizzy doing this, but it may work for you. The goal is to observe the position from all angles. Remember you should always be on the lookout for new clues.

Here is a list of questions to ask in order to get a clear picture of the overall position. I will ask them from your perspective. You also want to ask them from your opponent's perspective, pretending you are him. You will learn a lot about the position from a strategic point of view, see the big picture for both players, and then be able to focus your thinking accurately when it is your move again.

- **Where does my king want to live?** Kingside, queenside, or center? In the opening and middlegame you are looking for a safe place. As you transition into the endgame you are deciding when it is safe to activate your king. (*king safety*)
- **Where do I want to expand?** Kingside, queenside, or center? (*space*)
- **What is the best square for each of my pieces?** Answer this question for each piece. How long does it take the piece to get there and can my opponent stop me? (*piece placement, piece activity, and time*)
- **Are the pieces lined up for a tactical pattern?** For example, if a king and queen are lined up on the same diagonal, does the opponent have a bishop to pin or skewer them? If they are on the same file, is there a rook close by? Is there a back rank mate possible? (*tactics*)
- **Consider the pawn tactics.** What are the possibilities for each of the pawns? First look at the pawn battles with only the pawn involvement and then add in how the other pieces influence the pawn battles. Pawns can push, sit, or take. (*pawn structure and tactics*)
- **Who wants to trade?** The player who wants to trade is usually either ahead in material, defending the position, or controls less space on the board. In the endgame the player who is behind in material generally wants to trade pawns, with the goal of eliminating all of the opponent's pawns (future queens). (*trading*)
- **Is my piece better than his piece?** Compare each piece with its counterpart. If you have an isolated pawn, you may want to trade it for a regular pawn. If you have a good knight, you probably don't want to trade it for a bad bishop. Do this for each piece. (*trading*)

- **Pretend everyone taller than a pawn trades for its counterpart. Who wins the king and pawn endgame?** Don't worry about how the queens, bishops, etc., can exchange for each other, just assume they do. Look at the board with only the kings and pawns. This gives a more global idea of which side wants to trade. It generally holds that each trade along the way would help the player who would win the king and pawn endgame. (*trading*)
- **What are my possible dreams and can I make them come true?** This is where you can let your imagination run wild and test out ideas in your mind without touching the piece and being forced to move it. (*imagination*)
- **Who has the better position and is playing for a win?** Always be objective in determining what you are playing for. (*sorting possible outcomes*)
- **Look at the position statically, then dynamically.** Let's say you are attacking the king. See how long it takes to break in without your opponent trying to stop you. If you can't break in, this probably isn't a good plan. If you can, now look for ways for your opponent to stop you. Are they practical? (*imagination and calculation*)
- **Are my candidate moves from my previous move still possible?** Some may not be, based on your last move. What new candidate moves may be possible for your next move? (*imagination*)

Remember to look at this list from your opponent's point of view too.

APPENDIX C
SOLUTIONS TO PROBLEMS

♔ CHESS CHEMICALS, INC. ♚



"I see only one move ahead, but it is always the correct move."

José Raúl Capablanca

Lesson 1

Basset Hound Solutions



- 1-1 White wins with **47.f5!** Black is in zugzwang. If Black moves the king, he leaves the square of the h6 pawn. Moving the queenside pawns expose them to capture. **47...b2 48.Kxb2 a3+ 49.Kxa3 Kxf5 50.h7** and the pawn promotes.
- 1-2 White's king can easily block the path of Black's pawn on its way to e1. White wins by playing **51.g4!** Black's king is in the square of White's pawn, but Black's pawn on e6 blocks the king's path on the a2-g8 diagonal. **51...Kc4 52.g5 Kd5 53.g6 Ke5 54.g7** and the pawn promotes.
- 1-3 Black draws with **53...Kb8!** Losing are 53...Kb7? 54.Kb5 and 53...Kc7 54.Ka5 Kb7 55.Kb5 since White gets the opposition. Black gains the opposition after 54.Ka5 Ka7 or 54.Kb5 Kb7. 54.b5 Kb7 and Black can prevent White's king from moving in front of the pawn.
- 1-4 Black cannot take the bishop because White can prevent Black's king from reaching h8 after 48...Kxb5? 49.Kxh4 Kc6 50.Kg5 Kd7 51.Kg6 Ke7 52.Kg7. Black must get the king to h8 as fast as he can with **48...Kd6!** Black's king reaches h8 after **49.Kxh4 Ke7 50.Kg5 Kf7 51.Kh6 Kg8**. White cannot promote the pawn because he has a light-squared bishop and h8 is a dark square.
- 1-5 White draws with **56.c4!** 56.Kb2? c4 57.c3 Kd3 58.Kb1 Kxc3 59.Kc1 White has the opposition, but Black's king is on the 6th rank. 59...Kd3 60.Kd1 c3 61.Kc1 c2 62.Kb2 Kd2 and the pawn promotes. **56...Kc3 57.Kc1 Kxc4 58.Kc2** White has the opposition with a drawn position.
- 1-6 Black wins by playing **58...c2+ 59.Kc1 Kc3** White is in zugzwang and must move the a-pawn. **60.a4 bxa4 60...bxa3 61.b4 Kb3 62.Kd2 a2** and Black can promote one or both passed pawn(s). **61.bxa4 b3 62.a5 b2 mate**.
- 1-7 Black has winning chances because his king is closer to the pawns. White can salvage a draw with **56.c6!** 56.Ke3? Kd5 57.Kd3 (57.c6 Kxc6! wins for Black since White cannot get the opposition.) 57...Kxc5 58.Kc3 Kb5 59.Kb3 b6 and Black has the opposition. **56...bxc6 56...b6 57.Ke3 Kd6 58.Kd4 Kxc6 59.Kc4** and White won't allow Black's king in front of the pawn. **57.Ke2!** White gains the distant opposition. 57.Ke3? Ke5 58.Kd3 Kd5 59.Kc3 Kc5 gives Black a winning position since he has the opposition with the king in front of the pawn. **57...Kd6 58.Kd2 Kd5 58...Kc5 59.Kc3** is a draw. **59.Kd3** White has the opposition and the game is drawn.
- 1-8 Black draws with **43...Ke6!** moving into the square of White's a-pawn. 43...Ke7 is equally as good. Losing is 43...g5? 44.a5 g4 45.Kd4 keeping White's king in the square of Black's pawn. **44.a5 44.Kc6 g5 45.a5 g4 46.a6** and White will promote one move before Black with a drawn position. **44...Kd7** staying in the square of the pawn. **45.Kb6 Kc8** The game is drawn since both kings are in the square of their opponent's passed pawn.
- 1-9 White wins by playing **47.g7 Kh7 48.g8=Q+** 48.Kf7? stalemate **48...Kxg8 49.Kg6** with the opposition and a winning position.
- 1-10 Black draws by playing **48...a4!** 48...Kxf8? 49.Kd5! Ke7 50.Kc6! Kd8 (50...a4 51.bxa4 Kd8 52.Kb7 prevents Black's king from reaching a8.) 51.Kb5 Kc7 52.Kxa5 Kb7 53.Kb5 with the opposition. **49.bxa4 49.b4 Kxf8** and Black's king is still in the square of the b4 pawn. **49...Kd7** Draw since Black's king is in the square of the a-pawn and White's bishop isn't on the color of the a8 promotion square.

Chess Detective Solutions



- 1-11 White wins by taking the opposition with **53.Ke5**. Also winning is 53.Kc5 Kd7 54.Kb6 Kd6 55.e5+ Kd5 56.Kc7 Ke4 57.Kd7 Kf5 58.Kd6 Kxf4 59.Kxe6. **53...Kd7** 53...Kf7 54.Kd6 Kf6 55.e5+ Kf5 56.Ke7 also wins for White. **54.Kf6 Kd6 55.f5** creating a passed pawn and winning for White. 55.e5+ Kd7 56.Kf7 is also winning.
- 1-12 White wins with **55.Kd3!** 55.Ke3 also wins after 55...c2 56.Kd2 Kb3 57.Kc1 or 55...Kb3 56.h7 c2 57.Kd2 Kb2 58.h8=Q+ transposing to the main line. **55...Kb3 56.h7 c2 57.Kd2! Kb2** White promotes with check with Black's king on b2. **58.h8=Q+** White promotes first. **58...Kb1 59.Qb8+** 59.Qh1+, 59.Qc3, 59.Qc8, and 59.Qh7 also win. **59...Ka1 60.Kxc2 Ka2 61.Qb2 mate.**
- 1-13 Black has winning chances with the extra pawn and better king position. White draws with **55.Kc1!** 55.Ka1? Kc2 56.Ka2 Kc1 57.Ka1 (57.Ka3 Kb1 58.Kxa4 Kxb2 59.Kb4 c3 and the pawn will promote.) 57...a3! 58.bxa3 c3 59.a4 c2 60.a5 Kd2 61.a6 c1=Q+ wins for Black. **55...Ka2 56.Kc2 Ka1** 56...c3 57.bxc3 Ka3 58.c4 Kb4 is a draw. **57.Kc1 Ka2 58.Kc2 Ka1 59.Kc1 Ka2 60.Kc2** is a draw by threefold repetition.
- 1-14 Black wins by retreating the king with **49...Kg8!** 49...Kf6? 50.h6! g5 (50...gxh6 51.Kd3 is a draw since White's king can reach h1 and Black has a rook pawn.) 51.Kd3 Kg6 52.Ke3 Kxh6 53.Kf3 Kh5 54.Kg3 is a draw. **50.h6 g6! 51.Kd3 Kh7 52.Ke3 Kxh6 53. Kf3 Kh5! 54.Kg3 Kg5** Black is winning since the king is in front of the pawn with the opposition.
- 1-15 Drawing is **44...Kh5!** 44...Kf6? 45.Kg2 Ke5 46.Kf3 is winning for White. **45.e5** 45.Kg2 Kxh4 46.Kf3 Kg5 47.Ke3 Kf6 48.Kd4 Ke6 with a drawn position. **45...Kg6** 45...Kxh4? leaves the square of the e-pawn. **46.e6** 46.Kg2 Kf5 47.Kg3 Kxe5 48.Kg4 Kf6 and Black draws since the king can reach h8 in front of the rook pawn. **46...Kf6 47.h5 Kxe6 48.h6 Kf6** and Black's king is in the square of the pawn.
- 1-16 Black wins with **52...Kc3 53.Kd1 Kd4!** sacrificing the d-pawn. 53...f3 stalemate or 53...Kd3 stalemate. **54.Kxd2 f3 55.Kd1** 55.Ke1 Ke3 transposes to the main line in a move. **55...Kd3** taking the opposition. **56.Ke1 Ke3 57.Kf1 f2 58.Kg2 Ke2** and the pawn will promote.
- 1-17 White wins by preventing Black's king from moving to the c-file with **61.Kd4!** 61.Ke5? Kc5 62.f3 Kc6 63.f4 (63.Kf6 Kd5 64.f4 Ke4 65.f5 [65.Kg5? f5! wins for Black since White is in zugzwang.] 65...Kf4 66.Kxf7 Kxf5 with a draw by insufficient mating material.) 63...Kd7 64.Kf6 Ke8 65.Kg7 f5! 66.Kf6 Kf8 67.Kxf5 Kf7 with the opposition and a draw. **61...Kb5 62.Kd5 Kb6** 62... Kb4 63.f4! Kc3 64.f5 Kd3 65.f6 Ke3 66.Kd6 Kf4 67.Ke7 with a winning position. **63.Kd6 Kb5 64.f4 Kc4 65.f5 Kd4 66.f6 Ke4 67.Ke7** White's king will capture Black's pawn and escort his own pawn to f8.
- 1-18 White wins with **51.g5** 51.Kg2 Kxe4 52.Kg3 Ke5 53.Kh4! Kf6 54.Kh5 Kg7 55.Kg5 is also winning for White since the king is in front of the pawn and he has the opposition. **51...Ke6 52.Kf2 Kf7 53.e5** 53.Kf3 Kg6 54.Kf4 is also winning. **53...Kg6 54.e6 Kg7 55.Kf3 Kf8 56.g6 Ke7 57.g7** and the g-pawn can promote.
- 1-19 Black draws by playing **41...g3!** 41...Kc5? 42.Kd3 g3 43.f3 (43.fxc3? g4 and White is in zugzwang.) 43...Kd6 44.Kxd4 with a winning position. 41...Kd6? 42.Kd3 g3 43.fxc3 Ke5 44.g4 and Black has to move the king, losing the d4 pawn. **42.f3 Kd6 43.Ke2 Kc6 44.Kd2 Kd6** The game will be drawn by threefold repetition because neither king can move toward the queenside isolated pawns without being put in zugzwang.
- 1-20 Black wins with **54...Ke8!** keeping in contact with the f7 and f8 squares in order to trap Black's king in the corner after he captures the rook. **55.Kxh8** 55.Kg6 Kf8 56.h6 Ke7 57.Kg7 Ke8 58.Kg6 Kf8 59.Kxf5 Rxh7 60.Kg6 Kg8 is winning for Black. **55...Kf8 56.h6 Kf7** White is in zugzwang. **57.d5 cxd5 58.b4 cxb3 59.c4 b2** 59...dxc4? stalemate **60.cxd5 b1=Q 61.d6 Qb2 mate.**

Lesson 2

Basset Hound Solutions



- 2-1 White wins with **48.Kg4!** gaining an important tempo to avoid stalemate. 48.Kf2? Kh1 49.a6 h2 50.a7 stalemate. Losing is 48.a6? Kg1 49.a7 h2 50.a8=Q h1=Q+ skewering White's king and queen. **48...Kg2 49.a6 h2 50.a7 h1=Q 51.a8=Q+ Kg1 52.Qa1+ Kg2 53.Qb2+** White's queen can zigzag closer to Black's king. **53...Kf1 54.Qc1+ Kg2 55.Qd2+ Kf1+ 56.Qe1+ Kg2 57.Qe2+ Kg1 58.Kg3** Black has to give up the queen to avoid mate on the next move.
- 2-2 Black appears to be in trouble because the king is well behind the square of the c-pawn and White's king is close to the f-pawn. Black can draw by moving one step closer to the f-pawn with **38...Ke2!** 38...f4? 39.Ke4 wins for White. **39.Ke5** 39.c5 f4 40.c6 f3 41.c7 f2 42.c8=Q f1=Q is a draw since Black's king can protect the queen after 43.Qc4+. **39...Ke3!** moving closer to both pawns. **40.Kxf5** 40.c5 f4 41.c6 f3 42.c7 f2 43.c8=Q f1=Q is a draw. **40...Kd4** catching the c-pawn and drawing by insufficient mating material.
- 2-3 White can't break in on the queenside with 45.Kb3 due to 45...Kb5, keeping the opposition. White wins by moving the king to the kingside with **45.Kd3** 45.d6 Kxd6 46.Kb4 Kc6 47.Kc4 Kd7 48.Kd5 Ke8! saves the game because after 49.Kxe5 Ke7 Black gets the opposition. **45...Kd6 46.Ke3 Ke7 47.Kf3 Kf6 48.Kg4 Kg6 49.Kh4! Kf6** Black can't play 49...Kh6 because the king would leave the square of the d5 pawn. **50.Kh5** White is outflanking Black. **50...Kf7 51.Kg5 Ke7 52.Kf5 Kd6 53.Kf6** Black is in zugzwang and will lose the pawn and the game.
- 2-4 White's king has to protect the f5 pawn when it is attacked by Black's king and must stay in contact with d3 so Black cannot safely advance the pawns. Black's two connected passed pawns are safe from White's king because if he ever gets the opportunity to capture the c5 pawn, he would leave the square of the d4 pawn. If it were White to move, he would be in zugzwang since he would either have to abandon the f5 pawn or after 40.Kf4 d3 41.Ke3 c4 the king would be restricted to the square of the d3 pawn and not be able to defend the pawn on f5. Black wins with **39...Kf7!** Black plans to triangulate on f7-e7-f6. Also winning, but more complicated since it brings the queens back to life, is 39...Kg5 40.Ke5 d3 41.f6 d2 42.f7 d1=Q 43.f8=Q Qd4+. **40.Kd3 Ke7 41.Ke4** Any other king move places Black's king too far away to defend the f5 pawn. **41...Kf6** This is the initial position with White to move. Black has a winning position since White is now in zugzwang and will either lose the pawn or allow Black's pawns to advance.
- 2-5 Black wins by outflanking White's king with **44...Kd3**. 44...f4? 45.gxf4 Kxf4 46.Kg2 is a drawn king and pawn ending. **45.Kf1 Ke3 46.Kg2 Ke2 47.Kg1 Kf3 48.Kh2 Kf2 49.Kh1 Kxg3** Black is two pawns ahead with a winning endgame.
- 2-6 White wins with **37.Kc2!** trapping Black's king on the a-file in front of the pawn. **37...b5 38.c6 38.cxb6?** stalemate **38...b4 39.c7 b3+ 40.Kxb3 Kb1 41.c8=Q a1=Q** 41...Ka1 42.Qc1 mate or 41...a1=N+ 42.Kc3 also wins for White. **42.Qc2 mate.**
- 2-7 White's e4 pawn is an outside passed pawn. White wins by playing **51.Kd3 Ke5 52.Ke3 Ke6 53.Kd4 Kd6 54.e5+ Ke6 55.Kc5** White uses the e-pawn as a decoy. **55...Kxe5 56.Kxb5** White's king can escort the b-pawn to the promotion square.
- 2-8 Black wins with **45...Kd5!** moving into the square of the f-pawn. 45...b3? 46.f6 b2 47.f7 b1=Q 48.f8=Q is a draw. **46.Kg5** 46.f6 Ke6 47.Kg5 Kf7 blocks White's pawn and wins for Black. **46...b3 47.f6 Ke6!** forcing White's king to g6 giving Black's pawn a key tempo by promoting with check. **48.Kg6 b2 49.f7 b1=Q+ 50.Kg7 Qg1+ 51.Kf8 Qg6 52.Ke8 Qxf7+ 53.Kd8 Qd7 mate.**
- 2-9 Black sacrifices the c-pawn in order to outflank Black's king and win the pawn on b3 by playing **52...c2+ 53.Kc1 Ke3**. White played **54.Kxc2** 54.Kb2 Kd2 and the c2 pawn can promote. **54...Ke2 55.Kc1**

Kd3 56.Kb2 Kd2 57.Kb1 Kc3 58.Ka2 Kc2 59.Ka1 Kxb3 60.Kb1 Kc3 61.Kc1 b3 62.Kb1 b2 63.Ka2 Kc2 and the pawn can promote.

2-10 Correctly pushing the unopposed pawn on the queenside first, Black wins with **50...b6!** 50...a6? 51.a5 and White's pawn locks up Black's queenside pawns. **51.Kd3 a6** with the idea of 52...b5 creating an outside passed pawn. White's king will have to move to the queenside to capture the pawn while Black's king invades and wins pawns on the kingside.

Chess Detective Solutions



- 2-11 White wins by playing **42.Kd3!** moving toward the kingside to create a passed pawn. White also wins with 42.e4 f4 43.Kd2 Ke6 44.Ke2 Kxe5 45.Kf3 Black is in zugzwang and will lose the f4 pawn. Going after Black's queenside pawns with 42.Kd4? Ke6 43.Kc5 Kxe5 44.Kxb5 Ke4 45.Kxa4 Kxe3 46.b4 f4 47.b5 f3 48.b6 f2 49.b7 f1=Q 50.b8=Q Qc4+ 51.Qb4 Qc6+ gives Black drawing chances with correct play. **42...Kd7** 42...Ke6 43.Kd4 Ke7 44.Kd5 is winning for White. **43.e4 f4 44.Ke2 Ke6 45.Kf2! Kxe5 46.Kf3** Black is in zugzwang. **46...Ke6 47.Kxf4** White wins easily due to the extra outside passed pawn on e4.
- 2-12 **52.f5+!** White sacrifices the f4 pawn to clear a path for the king to invade and win the game due to the outside passed pawn on h3. Black locks up the position to prevent White from making progress after 52.Kg4? f5+ 53.Kh4 Kh6 or 52.h4? Kh5 53.Kg3 f5. **52...Kxf5** 52...Kg5 53.f6 Kxf6 54.Kg4 Kg6 55.h4 Kf6 56.Kf4 White has a winning position with the opposition and the outside passed pawn. **53.h4 Ke5** White is also winning after 53...Kg6 54.Kg4 Kh6 55.h5 Kg7 56.Kg5. **54.Kg4 f6 55.h5 Ke6 56.h6 Kf7 57.Kf5 Kg8 58.Kxf6** with a winning position.
- 2-13 With White to move, he would be in zugzwang and lose after 48.Kg6 f4 or 48.Kh4 Kf3. Black must keep the f-pawn protected and plays **47...Ke5**. Black can lose a move by triangulating between e5-d4-e4. **48.Kh5** 48.Kh4 Kf4 49.Kh5 Kf3 50.Kg5 Kxf2 51.Kxf5 g3 and Black's g-pawn can promote. **48...Kd4! 49.Kh4** 49.Kg5 Ke4 Black has triangulated back to the starting position with White to move. **49...Kd3! 50.Kg3** 50.Kg5 Ke4 and 50.Kh5 Ke2 are winning for Black. **50...Ke2** White is in zugzwang. **51.Kg2 f4 52.Kg1 f3 53.Kh2 Kxf2** with a winning position.
- 2-14 The pawn structure on the queenside is asymmetrical, giving Black the opportunity to create a passed pawn. **41...a4!** preparing to create a passed a-pawn. 41...b4? 42.a4 and White prevents Black from creating a passed pawn. 41...Kf6? 42.Ke4 a4 43.Kxd4 b4 44.axb4 a3 45.Kc3 and White's king gets into the square of Black's a-pawn. **42.Ke4 b4 43.Kxd4 bxa3 44.Kc3** As long as Black's pawn remains on a3, White must keep the king on c3 to stay in the square of the pawn. The battle is now between Black's king and White's passed d- and g-pawns. **44...Kg5 45.d4 Kxg4 46.d5 Kf5** Black's king is in the square of the d-pawn. After Black captures the d-pawn, White will be in zugzwang and forced to move the king, allowing the a3 pawn to promote.
- 2-15 White's pawn on h7 is about to promote. Black has four passed pawns on the a- and b-files that are blocked by White's king. Black is hoping for stalemate amidst his own pawns. White underpromotes to a knight with **48.h8=N!** After 48.h8=Q b4, White doesn't have a way to allow Black a move on the next turn to prevent stalemate. **48...b4** 48...Kb4 49.Nxf7 Kc4 50.Ne5+ Kxd4 51.f7 followed by 52.f8=Q. **49.Ng6!** White must allow Black a move to avoid stalemate. 49...fxg6 White's pawn on f6 is now a dangerous passed pawn. **50.f7 gxf5 51.f8=N!** A second knight underpromotion! Promoting to a queen results in a stalemate after White is forced to capture Black's f-pawn with the new queen in the next few moves. **51...f4 52.Ne6 f3 53.Nc7 f2 54.Nb5 mate**. White's knight arrives just in time!
- 2-16 Losing is 48.Ke3? Ke5 49.Ke2 Kd4 allowing Black's king to invade and win the game. **48.Kd2!** White plans to triangulate on e2-d2-e3. 48.Kf2 triangulating on e2-f2-e3 also works. **48...Ke5** 48...Kc6 49.Ke3 is winning for White since Black's king is too far away to protect the e4 pawn. **49.Ke3** Black is in zugzwang. **49...Kd6 50.Kxe4 Kc6 51.Kd3** White moves the king to the queenside to create a passed pawn. **51...Kb6 52.Kc3 Ka5 53.b4+! cxb4+ 54.Kb3** Black is in zugzwang. **54...Kb6 55.Kxb4** White has a passed c-pawn and a winning endgame position.
- 2-17 White creates a passed pawn with **53.f5+!** Heading to the queenside to capture Black's a- and b-pawns draws after 53.Kd4 Kf5 54.Kc5 Kxf4 55.Kb6 Kxg5 56.Kxb7 Kf6 57.Kxa6 g5 58.Kb7 g4 59.a6 g3 60.a7 g2 61.a8=Q g1=Q. **53...gxf5+ 54.Kf4 Kf7 55.Kxf5 Kg7 56.Ke6** 56.g6 also wins after 56...Kg8 57.Kf6 Kf8 58.g7+ Kg8 59.Kg6 b5 60.axb6 a5 61.b7 a4 62.b8=Q mate. **56...Kg6 57.Kd6**

- Kxg5 58.Kc7 Kf6 59.Kxb7 Ke7 60.Kxa6 Kd7 61.Kb7** White prevents Black's king from getting in front of the pawn or trapping his own king on the a-file in front of the pawn.
- 2-18 Black wins by playing **50...Kc6!** 50...exf4? 51.a4 h5 52.a5 Kc6 53.Ke2 g5 54.Kf3 h4 55.Kg4 and White's king successfully stops Black's kingside pawns. 55...Kb5 56.e5 Kc6 57.e6 Kd6 58.a6 creating a second passed pawn. White also wins after 50...h5? 51.fxe5+ Kxe5 52.a4 Kd6 53.a5. **51.fxe5 Kxb6** White no longer has a pawn majority on the queenside and Black's king is in the square of the e5 pawn. Black wins with the connected outside passed pawns on the kingside.
- 2-19**56.Ke3!** transferring the king to the kingside to support and advance the passed e5 pawn. 56.Kd4? Ke6 puts White in zugzwang and loses the e5 pawn. **56...Kf7** 56...Ke6 57.Kf4 Ke7 58.Kf5 is easily winning for White. **57.Kf3!** gaining the distant opposition. 57.Kf4? Ke6 puts White in zugzwang and costs the e5 pawn. **57...Ke7 58.Kg4 Ke6** Black prevents 59.Kf5. **59.Kf4** White triangulated to reach this position with Black to move. **59...Ke7 60.Kf5 Kd7 61.e6+ Ke7 62.Ke5** White can win the d5 pawn and be two pawns ahead with a winning position.
- 2-20White has the advantage of the first move in this pawn race and wins by playing **49.f4!** 49.h4? d5 and the resulting pawn race also allows Black to safely promote. **49...Kb4** moving into the square of the pawn. Black's best defense is to chase White's pawn with the king. If Black accepts the challenge to a pawn race by playing 49...d5, White promotes with check on f8 and will be able to prevent Black's d-pawn from promoting. **50.h4 d5** Since Black's king is outside the square of White's h-pawn, he advances the d-pawn. If Black plays 50...a5 to challenge White's h-pawn to a race, White promotes first with the new queen on h8, defending the a1 promotion square on the long diagonal. **51.f5** If White plays 51.h5 using the h-pawn to challenge Black's d-pawn to a race, Black promotes on d1 with check with an equal position. **51...Kc5** 51...d4 loses the pawn race since White's f-pawn promotes with check. **52.h5** White repeats the pattern. **52...d4 53.f6 Kd6 54.h6 d3 55.f7 Ke7 56.h7 d2 57.f8=Q+ Kxf8 58.h8=Q+ Ke7 59.Qd4** and White wins Black's d2 pawn. Promoting a pawn with check is an important endgame concept since it gains a tempo in a pawn race.

Lesson 3

Basset Hound Solutions



- 3-1 White's best move is **38.a5!** threatening 39.a6 to create a passed a-pawn. **38...bxa5 39.b6 cxb6 40.d6** creating a passed pawn on d6 that will promote ahead of Black's a-pawn. Black's king is outside the square of White's d6 pawn.
- 3-2 White needs to create a passed pawn and promote it before Black's king arrives on the queenside. **44.c5** White also wins by playing 44.b6 Kf6 45.c5 Ke6 46.c6 bxc6 47.b7. **44...Kf6 45.c6** 45.b6 Ke6 46.c6 transposes to the previous variation. **45...bxc6 46.b6** creating a passed b-pawn. 46.bxc6? Kd6 and Black's king is in the square of the pawn. **46...Ke6 47.b7** and White can promote the passed b-pawn.
- 3-3 Black sacrifices the bishop to create a passed pawn with **38...Bxc3! 39.bxc3** White can't protect the b2 pawn. 39.Kf1 Bxb2 40.Ke2 Be5 41.Kd2 Ke6 is winning for Black due to the outside passed pawn on b3. **39...b2** and Black can promote the pawn.
- 3-4 White creates a passed pawn by playing **46.b5!** Not as strong but also winning is 46.Na4 followed by 47.Nc5 improving the knight's position. **46...axb5** 46...Kd7 47.b6 creates a strong protected passed pawn. **47.a6 b4** 47...Bg2 48.Nxb5 is winning for White due to the outside passed a-pawn. **48.Nd5+!** checking Black's king and blocking the bishop from protecting the a8 promotion square on the h1-a8 diagonal. **48...exd5 49.a7** Black cannot stop the pawn from promoting.
- 3-5 White has an additional pawn, but the king is far away from Black's more advanced queenside majority. Black creates a passed pawn with **50...b4!** 50...a4? is the wrong pawn to push since White could play 51.Ke2 to move close enough to the queenside to stop Black's pawns. **51.Ke2** 51.axb4 c3! 52.bxc3 a4 with an outside passed pawn that cannot be stopped. **51...c3!** 51...bxa3? 52.bxa3 and White's king is in the square of the c-pawn. **52.Kd3** 52.bxc3 bxa3 leaves White's king outside the square of the a3 pawn. **52...cxb2 53.Kc2 bxa3** Black's king can advance to capture the d4 pawn and then win by moving to either side of the board.
- 3-6 White's knight protects the e4 pawn defending against the threat of 41...Bxe4 42.fxe4 f3, creating a passed pawn on the kingside. Black creates winning passed pawns on the kingside by playing **41...Bc8 42.Nd3 Bxh3! 43.Ne1** 43.gxh3 g2 **43...Bxg2! 44.Nxg2 h3** and one of the pawns will promote.
- 3-7 Black's king is closing in on White's pawn majority on the kingside. White creates a passed pawn by playing **69.f6!** Losing is 69.g6? h6 70.Kd3 Kxf5. 69.h6? gxh6 70.g6 hxg6 71.fxg6 Kf6 72.Kd2 is drawing because White's king can reach h1 in front of Black's passed rook pawn. **69...gxf6 70.g6 hxg6 71.h6** Black's king can't stop the passed h6 pawn.
- 3-8 White's best move is **38.Bxd5!** 38.b5 is also winning. **38...cxd5 39.b5** creating an outside passed pawn. **39...axb5 40.a6** and the pawn can promote in two moves.
- 3-9 White creates an outside passed pawn by playing **52.c3! bxc3** 52...b3 53.axb3 winning a pawn or 52...c5 53.dxc5+ Kxc5 54.cxb4+ Kxb4 55.Kd4 with a winning outside passed pawn on a2. **53.Kxc3 Kc7** 53...c5 54.dxc5+ Kxc5 55.a4 giving White the outside passed pawn. **54.Kb4 Kb6 55.a4 Ka6 56.Kc5 Kb7 57.a5** White is winning due to the outside passed a-pawn.
- 3-10 Black creates a second passed pawn by playing **59...h3!** 59...hxg3? 60.Kf3 and White's king will win the g3 pawn and the bishop can sacrifice itself for the b2 pawn, resulting in a draw by insufficient mating material. **60.Kf2 Bf5 61.Kg1 Kd3 62.Kh2 Kc2 63.Be5 b2 64.Bxb2 Kxb2** Black's king can return to the kingside and help the h-pawn promote.

Chess Detective Solutions



- 3-11 White creates a passed pawn by playing **39.g5+! hxc5 40.h5** 40.hxc5+ Kf5 or 40.Rxc5 Rb1 41.Kg2 with an equal position. **40...Rb1 41.Kg2** preventing Black's rook from moving to h1 to get behind the passed pawn. White's rook cuts off Black's king from moving to the g-file to stop the pawn. White can promote the passed h-pawn to win the game.
- 3-12 Black has an outside passed pawn on c4. White has an advanced pawn majority on the kingside. Black can win if the king can reach the kingside before White can create a passed pawn. White wins with **45.f6!** Any other move allows Black to play 45...f6 to prevent White from creating a passed pawn. **45...gxf6** White creates a winning passed f-pawn after 45...g6 46.hxc6 fxc6. **46.f4 Kd4** 46...f5 47.g5 creates a passed pawn on the h-file. **47.g5! fxc5 48.fxc5 Ke5** moving toward White's soon-to-be passed h-pawn. 48...hxc5 49.h6 and the h-pawn can promote. **49.gxh6 Kf6 50.Kc2!** Black's king cannot move to g6 or g7 to win White's pawns. **50...c3 51.Kxc3** Black is in zugzwang and has to move the king. **51...Kg5 52.h7** and the pawn will promote.
- 3-13 White has a passed pawn on a4 on its way to promoting. White's bishop is defending the pawn on d5, which blocks the bishop from defending the g2 and h1 squares if Black's pawn majority on the kingside should advance that far. If Black can move the king to h8 and eliminate White's a-, d-, and f-pawns, White cannot win with only the bishop and h-pawn because the bishop is not on the color of the h8 promotion square. Black draws by playing **43...Nxa4! 44.Kxa4 g4 45.fxc4** If 45.Kb3 gxf3 46.Kc2 f2 47.Bb5 Kxd5, White can win Black's pawns, but not the game, since the bishop is not on the same color of h8. **45...fxc4 46.Kb4 h5 47.Be8** The bishop must abandon the d-pawn in order to stop Black's kingside pawns. **47...Kxd5 48.Bxh5 Ke5 49.Bxc4** Black can draw since the king can reach h8.
- 3-14 White has a queenside pawn majority and can win the game with two sacrifices starting with **42.Rxd5!** eliminating Black's knight. **42...exd5 43.Nxa7** sacrificing the knight to create three passed pawns on the queenside. 43.b6 axb6 44.axb6 also wins by creating a passed b-pawn which Black will soon have to give up the rook to stop. **43...Rxa7** White's newly-created pawn storm is ready and able to march up the board and overpower Black's rook. **44.b6 Rb7 45.b5 Kxc5 46.a6 Rxb6 47.a7** Black's rook can't prevent White's pawn from promoting on a8.
- 3-15 Although Black has the inferior king position, he can win by taking advantage of the asymmetrical pawn structure and further advanced pawns by playing **42...f4! 43.Kd5** 43.exf4 h4 44.gxh4 g3 45.fxc3 e3 and 43.gxf4 h4 followed by 44...h3 both win for Black. **43...h4** Also winning for Black is 43...f3 44.gxf3 h4 45.gxh4 g3 46.fxc3 exf3 creating a passed f-pawn. **44.Kxe4** 44.gxh4 g3 45.fxc3 fxe3 creates a winning passed e-pawn. **44...f3 45.gxf3 h3** and Black will promote the passed h3 pawn.
- 3-16 White has a passed pawn on a2 and Black has a pawn majority on the kingside in the pawn race to promote. Black wins with **51...h5!** Too slow is 51...Kg5? 52.a4 Kh4 53.a5 Kh3 54.a6 Kxh2 55.a7 g3 56.a8=Q since White promotes first. **52.a4 h4 53.a5 g3** 53...h3? 54.a6 g3 55.a7 gxh2 (55...g2 56.a8=Q g1=Q 57.Qg8+ skewering the king and queen.) 56.a8=Q protecting the h1 square. **54.hxc3 h3!** 54...hxc3? 55.a6 g2 56.a7 g1=Q 57.a8=Q is drawn. **55.a6 h2 56.a7 h1=Q** promoting first and protecting the a8 promotion square on the long diagonal.
- 3-17 White's pawns are further advanced. The pawn structure is symmetrical and locked up. White's best move is sacrificing the rook with **43.Rxc7+!** forking Black's king and rook. **43...Rxc7 44.Bxb6** White created two advanced connected passed pawns and the bishop is skewering Black's rook and knight. **44...Rb7** 44...Rc8 45.Bxd8 Rxd8 46.b6 and one of White's passed pawns can promote. **45.cxb7** 45.Bxd8 Rxb5 46.Be7 winning the d6 pawn on the next move is also winning for White. **45...Nxb7 46.h5** fixing Black's h-pawn on a dark square where it can be attacked by

the bishop. **46...Kf7 47.Be3 Kg7 48.Kf2** White's king can invade on the kingside via f5 or march to the queenside to help the b-pawn promote.

- 3-18 White has an extra pawn on the kingside. The asymmetrical pawn structure gives Black the opportunity to create a winning passed pawn on the queenside with **34...c4! 35.bxc4** White loses after **35.Kg3 a4** (Also winning for Black is **35...c3 36.bxc3 a4 37.bxa4 b3 38.cxb3 dxc3** creating a passed c-pawn.) **36.bxa4 b3 37.cxb3 c3 38.bxc3 dxc3 39.a5 c2** and Black promotes first. White also loses after **35.dxc4 a4 36.c5 (36.bxa4 b3 37.cxb3 d3** and the d-pawn promotes.) **36...axb3 37.cxb3 d3 38.c6 d2 39.c7 d1=Q 40.c8=Q Qxb3+ 41.Kg2 Qxb2+ 42.Kf3 Qc3+** forking the king and queen. **35...a4 36.c5 a3 37.bxa3 bxa3 38.c6 a2 39.c7 a1=Q** Black promotes first. **40.c8=Q Qf1+ 41.Kg3 Qf4+** Black will continue to check White's king to force him to a square where he can safely capture the g4 pawn with check in order to trade queens. **42.Kh3 Qf3+ 43.Kh2 Qf2+ 44.Kh3 Qh4+ 45.Kg2 Qxg4+ 46.Qxg4 Kxg4 47.Kf2 Kxh5** and Black wins because of the passed g-pawn.
- 3-19 Black ignores the threat on the a5 pawn and creates a passed pawn by playing **36...d3+**! Black has a smaller advantage after **36...Kc4 37.Bxa5 Rf8 38.Kd2 Rf3. 37.cxd3** Both **37.Kxd3 Rf3+** and **37.Kd1 dxc2+ 38.Kxc2 b3+ 39.Kb2 (39.Kxb3 Rf3+)** **39...Kb4** are winning for Black. **37...b3 38.Kd2 Kb4** invading with the king. Black also has an active rook. **39.Bb6 b2 39...Rf3 40.Ne2 b2** is also winning for Black. **40.Kc2 Ka3 40...Rf3** is also winning. **41.Ne2 b1=Q+ 42.Kxb1 Rb7 43.Nc3 Rxb6+** Black has a winning position since he is ahead the exchange with a better placed king.
- 3-20 White's king and f2 rook are lined up on the g1-a7 dark-squared diagonal. Black's c2 pawn is one square away from promoting. Black offers the rook with **34...Rc4!** placing the rook behind the pawn and clearing the g1-a7 diagonal for the bishop. White captured the rook with **35.bxc4**. Black's pawn on b4 is now passed. **35.Rc1 Bc5 36.Kg2 Bxf2 37.Kxf2 Rc3** attacking the b3 and g3 pawns. **35... Bc5 36.Kg2 Bxf2 37.Kxf2 b3** Black can play **38...b2** and promote either or both of the connected passed pawns.

Lesson 4

Basset Hound Solutions



- 4-1 White can safely promote the pawn after **52.Bb2** with the threat of 53.Bg7 to block Black's bishop from defending f8 on the short h6-f8 diagonal. 52.Bc1 Bxc1 53.f8=Q also promotes the pawn. **52...Ke7 53.Bg7** blocking Black's bishop so the pawn can safely promote.
- 4-2 Black is a pawn ahead in material. White wins by creating a passed pawn on f6 and then threatening to promote it by playing **66.Qc8+ Kh7 67.Qxe6! fxe6 68.f7**.
- 4-3 White wins by underpromoting to a rook by playing **50.c8=R!** threatening 51.Ra8+ with mate to follow. 50.c8=Q? Rc4+ 51.Qxc4 stalemate. **50...Ra4 51.Kb3** with the threats of 52.Rc1 mate and 52.Kxa4.
- 4-4 White is ahead a pawn with a passed pawn on a7 that is close to promoting. Black's queen is defending the a8 square. White wins quickly with **44.Rf5!** Black is losing in all these variations: 44...Qxf5 45.a8=Q mate, 44...exf5 45.Qxd5 Rxd5 46.a8=Q+, 44...Qc6 45.Rxc5!, and 44...Rd7 45.Qe8+ Rd8 46.Rxd5 Rxe8 47.a8=Q+.
- 4-5 White is a bishop behind in material, but has a dangerous passed pawn on h6 that can only be stopped by Black's rook after the bishop moves. White pins the bishop to the rook and blocks the rook from defending h8 by playing **31.Rd8!** After **31...Kxd8**, Black's king and bishop both interfere with the rook defending the promotion square. **32.h7** and the pawn will promote.
- 4-6 Black has the more centralized king and an extra pawn, but needs to prevent White's outside passed h-pawn from promoting. Black's king is outside the square of the pawn and both f-pawns need to move to clear the a1-h8 diagonal for the bishop to defend the promotion square. White wins by blocking the f5 pawn with **39.Bf4!** 39.h6? f4 40.h7 f5 and Black's bishop protects h8. **39...Kxf4 40.h6 Ke3 41.h7 f4 42.h8=Q** promoting the pawn.
- 4-7 White promotes the g-pawn after **55.g6! Rxb5 55...hxg6 56.Rxa5** wins Black's rook. **56.g7** Black can't protect the promotion square since White's bishop prevents Black's king from moving to f7 and White's king prevents Black's rook from moving to g5.
- 4-8 Black would like to promote the passed c-pawn. **30...Bh3+ 30...Qxf2+ 31.Kxf2** forcing White's king into the square of the pawn. **31.Kg1 Qa1!** pinning White's bishop to the king. White's queen is tied down defending the bishop, allowing Black's pawn to safely advance. **32.Qe2 c3 33.Kf2 Bxf1 34.Qxf1 Qxf1+ 35.Kxf1 c2** The pawn can promote since White's king is outside the square of the pawn.
- 4-9 Black is threatening to capture both White's rook and pawn on b5. White wins with **48.Ra8+! Kxa8 48...Nxa8 49.Kc8! Nc7 50.Kxc7** and 48...Kb7 49.Ra7+! Kxa7 50.Kxc7 win for White. **49.Kxc7 Ka7 50.Kc6 Ka8 51.Kxb6 Kb8** Even though Black has the opposition, White wins because the king is on the 6th rank in front of the pawn. **52.Ka6 Ka8 53.b6 Kb8 54.b7 Kc7 55.Ka7** and White can promote the pawn the next move.
- 4-10 White's passed pawns are blockaded and Black is threatening to win the pawn on f6. White wins with **39.Qd5+ Kxf6 39...Ke8 40.Qe6** threatening 41.f7 mate. After 40...Rxf6 41.Qxf6, White has a material advantage and a passed pawn on e7. **40.Qd8! Rg8 41.e8=N++!** 41.e8=Q+? Rxd8 is a roughly equal position. **41...Kf7 42.Qd7+ Kf8 43.Nc7** White threatens 44.Ne6 mate and 44.Nxa8.

Chess Detective Solutions



- 4-11 Black is a pawn ahead in material and has superior king and piece placement. Black promotes a pawn by sacrificing the exchange with **38...Rxd1+! 39.Rxd1 f3** threatening 40...e2+ forking the king and rook. **40.gxf3+ Kxf3 41.Rd3** pinning the e3 pawn to the king. **41...Be1! 42.Rxe3+** 42.Kxe1 g2 promoting the g-pawn or 42.h4 g2+ 43.Kg1 Bf2+ 44.Kh2 g1=Q+ 45.Kh3 Qh1 mate. **42...Kxe3 43.Kxe1 g2** and the pawn can promote the next move.
- 4-12 Advanced passed pawns can promote in the middlegame. Black is ahead a knight to a pawn in material, but White's f7 pawn is one square from promoting. Black's g7 bishop is not currently protecting the rook since it is pinned to the king. White wins by playing **25.Re8** pinning Black's rook to the king and threatening 26.Rxf8 mate. **25...h6** 25...Qb4 loses to 26.Qd8 adding another attacker to the rook. 25...Rxe8 26.fxe8=Q mate or 25...Bxd4 26.Qxd4+ Ne5 27.Qxe5 mate. **26.Rxf8+ Kh7 27.Rh8+! Bxh8** 27...Kxh8 28.f8=Q+ Kh7 29.Qxg7 mate or 29.Q (either) g8 mate. **28.f8=N mate.**
- 4-13 Black sacrifices a knight for a couple pawns to create a pawn storm with **36...Nxa3! 37.Bxa3 Nb5 38.Bc1 Nxc3** Black threatens 39...Nb1 followed by advancing the passed pawns. 38...a3 39.Kd2 b2 40.Bxb2 axb2 41.Kc2 Nxc3 42.Kxb2 Nb5 43.Nxd5 gives White a pawn advantage. **39.Ne2 Nxe2 40.Kxe2 c3 41.Kd3 b2 42.Kc2** 42.Bxb2 cxb2 43.Kc2 a3 wins for Black. **42...bxc1=Q+ 43.Kxc1 a3 44.Kb1 Kf7** White's king can't move without allowing one of the pawns to promote. White will be in zugzwang and have to move the king after he runs out of pawn moves on the kingside.
- 4-14 Black threatens to create a passed pawn with **44...g3!** Losing is 44...fxe3? 45.fxe3 g3 46.hxg3 g2 47.Bxe4 protecting the h1 square. **45.hxg3** 45.Bxe4 g2! and the pawn promotes or 45.fxg3 fxe3 and the e-pawn will promote. **45...f3!** blocking the h1-a8 diagonal to cut off White's bishop from protecting h1 after the bishop captures the pawn on e4. **46.Bxe4 Bg4 47.c7 h2 48.c8=Q Bxc8 49.Bxf3 Bb7+ 50.Kc5 Bxf3** followed by **51...h1=Q.**
- 4-15 White's bishop is under attack. The bishop could safely retreat with a winning position, but the best move is pushing the passed pawn with **40.b6+!** Black attacks the rook with **40...Kd8** 40...Kb7 or 40...Kb8 lose to 41.Bxd7. **41.b7! Kxe7** 41...Bxb7 42.Rxd7+ Kc8 43.Rxf7+ gxf5 44.Rxf8+ increases White's material advantage. **42.b8=Q dxc5+ 43.Kxc5 gxf5 44.Qe5+ Kd8 45.Qf6+ Ke8** 45...Kc7 46.Qb6 mate **46.Kd6** followed by **47.Qe7 mate.**
- 4-16 White is three pawns ahead, including a passed pawn on e7. Promoting to a queen with 41.e8=Q? loses to 41...Rxh3+! 42.gxh3 Qxh3+ 43.Qh2 Qxh2 mate. White won the game with **41.Qh2** defending the mate threat. Other winning lines where the e7 pawn promotes are 41.Qd4+ Kh6 42.Qh8+ Kg5 43.Qxh4+ Kxh4 44.e8=Q or 41.e8=N+ Kg8 42.Nf6+ Kg7 (42...Qxf6 43.gxf3) 43.Ng4 allowing the knight to interpose on h2 to protect against Black's mate threats after 43...Rxh3+ 44.gxh3 Qxh3+ 45.Nh2. **41...Bxh2 42.e8=Q** White is winning because the new queen protects both the rook on e1 and the pawn on g6. Black's bishop and rook are both under attack and Black's king is in danger.
- 4-17 Preventing your opponent from promoting a pawn is as important as promoting your own pawn. White is ahead two minor pieces, but Black's a3 pawn is dangerously close to promoting. White wins with **48.Nc6!** with the threat of 49.Nb4+, hoping to get to a2 to stop the pawn. **48...Kxc6** 48...Kc5 49.Na5 a2 50.Nb3+ protects the a1 promotion square. **49.Bf6 Kd5 50.d3! a2 51.c4+ Kc5** 51...dxc3 52.Bxc3 protecting the a1 promotion square. **52.Kb7!** attacking c6. **52...a1=Q** If 52...Kd6 or 52...Kb4, then 53.Bxd4 stops the pawn from promoting. **53.Be7 mate!**
- 4-18 White has an extra rook, but Black has a dangerous pawn storm. To advance the pawns, Black sacrifices the exchange with **27...Rxc5! 28.bxc5 Bxc5** White has two rooks against a bishop and five pawns. **29.Rab1 f3** 30...e3+ followed by 31...e2 is threatened. **30.Rb4 Kf5** advancing the king to

support the pawns. 30...e3+ is also winning. **31.Rd4** blocking the bishop on the g1-a7 diagonal. 31.Rxb7 e3+ 32.Kd3 e2 is winning for Black. **31...Bxd4 32.cxd4 Kf4** White cannot stop Black from playing 33...e3+. The advancement of Black's pawns will force White to give up the rook, leaving Black with extra pawns in the resulting king and pawn ending.

4-19 White plays **29.c6!** with the threat of 30.c7. **29...Kd6 30.fxe6** creating a second passed pawn. **30...Nxc6 30...axb4 31.e7 Kxe7 32.c7** and White can promote the c-pawn. **31.Nxc6 Kxc6 32.e4!** sacrificing a pawn to create connected passed pawns. **32...dxe4 33.d5+ Kd6 34.Ke3 b4 35.Kxe4 a4 36.Kd4** White's king is in the square of Black's queenside pawns. **36...h5 37.gxh5** Losing is 37.h3? b3 38.axb3 a3 39.Kc3 hxg4 40.hxg4 f5 41.gxf5 Ke7! 42.b4 g4 43.b5 a2 44.Kb2 a1=Q+ 45.Kxa1 g3 46.b6 g2 47.b7 g1=Q+ 48.Kb2 Qb6+ and Black will win all of White's pawns. **37...a3 38.Kc4 f5 39.h6** and White will promote first.

4-20 White's bishop has to stop three passed pawns. **43.Bb1** stopping the a2 passed pawn. **43...f4 43...d4 44.Kc5 d3 (44...Kb3 45.g6 d3 46.g7 and White will promote with check.) 45.Kc4 a2 (45...d2 46.Bc2 mate) 46.Bxa2 Ka3 47.Kxd3 Kxa2 48.g6** and White can promote the passed pawn. **44.Kc5** threatening 45.Bc2 mate. **44...Kb3 45.g6 f3 45...Kb2 46.g7 Kxb1 47.g8=Q a2 48.Qg1+ Kb2 49.Qd4+ Kb1 50.Qd3+ Kb2 51.Qb5+ Kc2 52.Qxa5 Kb2 53.Qd2+ Kb3 54.Qd3+ Kb2 55.Kb4 a1=Q 56.Qd2+ Kb1 57.Kb3** and Black can only stave off checkmate for a move or two by giving up the queen. **46.g7 f2 47.g8=Q f1=Q 48.Qxd5+ Kc3 49.Qd4+ Kb3 50.Qa4+! Kxa4 50...Kb2 51.Qc2+ Ka1 52.Qa2 mate 51.Bc2 mate.**

Lesson 5

Basset Hound Solutions



- 5-1 White must keep Black's king from reaching the queenside since he can draw by blockading the a- and b-pawns. White prevents Black's king from moving to e6 by playing **46.Kf5!** By keeping the bishop on the h4-d8 diagonal and moving the king to e6 or d6 if Black's king retreats to e8, White can prevent Black's king from moving to the queenside. **46.Kxh5?** **Kxf6** and Black easily draws by marching the king to the queenside. **46...Ke8 47.Ke6** White can then play **48.Kd6** and **49.Kc7** and advance the pawns.
- 5-2 White has the more centralized king which is positioned to win Black's queenside pawns after **42.Rxd6 cxd6 43.Kd5**.
- 5-3 Black wins by trapping White's king on the a-file with **52...Kc5!** **52...Kc4 53.Kb6 d5 54.a4 d4 55.a5 d3 56.a6 d2 57.a7 d1=Q 58.a8=Q** is a draw. **53.Ka4 Kc4 54.Ka3 Kc3** keeping White's king trapped on the a-file to prevent him from reaching d1. **55.Ka4 d5 56.Kb5 d4 57.a4 d3 58.a5 d2 59.a6 d1=Q 60.Kb6 Qd5 61.Ka7 61.a7 Qa8** and Black's king can retreat to win White's pawn. **61... Qb5** White is in zugzwang. **62.Ka8 Qxa6** with a winning position.
- 5-4 White wants to play a4 and b5 to eliminate Black's remaining pawn and draw by insufficient mating material. **45...Bb5! 46.a4 Kc4! 47.axb5 47.Kb6 Kxb4 48.a5 Ka4 49.Kc5 Kxa5 50.Kd4 Kb4** and Black will be able to promote the a-pawn since the king can prevent White's king from reaching a1. **47...axb5** White is in zugzwang. **48.Kb6 Kxb4** and Black can promote the pawn to win the game.
- 5-5 White is a bishop ahead in material, but Black's king is more centrally located. Black wins with **42... Rh1+! 43.Kxh1 Kg3** with the threat of **44...Re1 mate**.
- 5-6 White uses the centralized king to move closer to the c6 pawn with **60.Ke5**. Black pushes the passed pawn with **60...h5**. White forces Black's king back by playing **61.Qg5+ Kf8 62.Kd6** threatening the c6 pawn. **62...Qe8 63.f6 Qf7** defending the mate threat on g7. **64.Kxc6** White creates a second passed pawn and is two pawns ahead in material. Black has the difficult tasks of stopping two passed pawns, defending mate threats, and protecting the h-pawn.
- 5-7 Because of White's aggressively placed centralized king, Black's king must stay on f7 to protect the e6 pawn. **40.f4** White wins by moving any pawn. Black has only three pawns that can move. When Black runs out of pawn moves, he will be in zugzwang and have to move the king away from protecting the e6 pawn.
- 5-8 Black improves the king position by playing **46...Kc3 46...c4? 47.Kd2 c3+ 48.Kd1 Ke3 49.Ke1** and Black cannot make progress. **47.Kb1 c4 48.bxc4 Kxc4 49.Kb2 Kb4** White can't defend the a4 pawn. **50.Ka2 Kxa4 51.Kb2 Kb4 52.c3+** If White moves the king, Black's king can move to c3. **52... Kc4 53.Kc2 a4 54.Kb2 b5 55.Kc2 a3 56.Kb1 Kxc3** is winning for Black.
- 5-9 White is a pawn behind, but is able to draw since his king is closer to the pawns. **44.Kf4 Kd5 44...Kd3 45.h4 Ke2 46.h5 gxh5 47.Kxf5 h4 48.Kg4** followed by capturing the pawn with a draw by insufficient mating material. **45.h4!** Losing is **45.Kg5? Ke5 46.Kxg6 f4 47.h4 f3 48.h5 f2 49.h6 f1=Q 50.h7 Qf6+ 51.Kh5 Kf4 52.h8=Q Qg5 mate. 45...Ke6 46.Kg5 Kf7 46...Ke5 47.Kxg6 f4 48.h5 f3 49.h6 f2 50.h7 f1=Q 51.h8=Q+** is a draw. **47.h5! gxh5 48.Kxf5** with a drawn position.
- 5-10 Black's king moves diagonally to reach the queenside pawns first with **35...Kd4!** **35...Bxb3? 36.Ke2 Bxa2 37.Kd2 Kd4 38.Kc2 Kc4** and Black's bishop has to move in order for the pawn to advance, allowing White's king to reach the promotion square and draw. **36.Ke2 Kc3 37.Kd1 Kb2**

preventing White's king from moving to c1. **38.Be4 Bxb3+!** **39.Kd2** 39.axb3 a2 and the pawn promotes. **39...Bxa2** **40.Bf5 Bb3** and Black's pawn can safely promote.

Chess Detective Solutions



- 5-11 White's king position is inferior to Black's since he is trapped on the edge of the board. Black's knight is stronger than the bishop since the pawns are clustered in a small area on the same side of the board. Black eliminates the h2 square from White's king with the checkmate idea of Ng3-h1-f2 by playing **33...Kg1!** White captures the knight with **34.Bxf5** 34.g4 Ng3 35.gxh5 gxh5 36.Bg6 Nh1 37.Bxh5 Nf2 mate **34...gxf5 35.g3** 35.g4 fxg4+ 36.fxg4 f3 and the f-pawn can promote. **35...Kf2!** threatening 36...fxg3. **36.g4** 36.gxf4 Kxf3 37.Kh2 Kxf4 38.Kg2 Kg4 wins the h-pawn. **36...fxg4+ 37.fxg4 f3!** 37...hxg4+? 38.Kxg4 f3 39.h5 Ke2 40.h6 f2 41.h7 f1=Q 42.h8=Q is a drawn ending. **38.gxh5 Ke2 39.h6 f2** is winning for Black. If White pushes the h-pawn, Black's f-pawn promotes with check.
- 5-12 White has a pawn on the 7th rank and the more centrally located king. **62.Rg8!** threatening both 63.e5 mate and promoting the pawn. **62...Rb6+** 62...Rxb7 63.e5 mate or 62...Rd2+ 63.Kc5 Rc2+ 64.Kd4 Rd2+ 65.Kc3 and Black is out of safe checks. **63.Kc7 Rxb7+** **64.Kxb7 f3** **65.Kc6** retreating to help the rook stop Black's pawns. **65...Ke5** **66.Re8+** **Kf4** **67.Kd5 f5** 67...f2 68.Rf8 with the threat of 69.Rxf7+. **68.Rf8!** **Kxg4** **69.Rxf5 h5** **70.Kd4 h4** **71.Ke3** threatening to win the f-pawn.
- 5-13 Black has the more centrally located king and the outside passed pawn. White has drawing chances due to Black's rook pawn. **56...Ke4!** threatening to help the f-pawn. Going after the c-pawn with 56...Kc4? 57.Kg4 Kxc3 58.Kxf4 Kb4 59.Ke3 Kxa4 60.Kd2 Kb3 61.Kc1 Ka2 is drawn since Black's king has to block the pawn in order to keep White's king from reaching a1. **57.Kg2 Ke3!** gaining a critical tempo over 57...Kd3 by forcing White's king a square further away from the f-pawn. **58.Kf1** 58.c4 Ke2 59.c5 f3+ 60.Kg3 f2 and Black promotes first. **58...Kd3** Black has time to win the queenside pawns and then promote the a-pawn. **59.Kf2 Kxc3** **60.Kf3 Kb4** **61.Kxf4 Kxa4** **62.Ke3 Kb3** **63.Kd2 Kb2** White's king cannot reach a1 or trap Black's king in front of the pawn. Black can promote the pawn and win the game.
- 5-14 In most positions with a knight against two pawns the side with the knight can only hope for a draw by insufficient mating material. Black's poor king position in the corner in front of the h-pawn gives White winning chances. **47.Kf1!** preventing Black's king from moving off the h-file. 47.Kf2? g5! 48.Nf6 g4 49.Nxg4 h2 50.Kg3 Kg1 and White cannot checkmate Black's king in the corner. **47...g5** White wins after 47...h2 48.Nd6 g5 49.Ne4 g4 50.Ng3 mate or 47...Kh2 48.Kf2 g5 49.Nf6 Kh1 50.Ng4 h2 51.Ne3 g4 52.Nf5 g3+ 53.Nxg3 mate. **48.Nf6!** **Kh2** **49.Kf2!** 49.Ne4? g4 50.Kf2 g3+ 51.Ng3 is drawing. **49...g4** **50.Nxg4+** **Kh1** **51.Kf1 h2** **52.Nf2 mate.**
- 5-15 White's rook cuts off Black's king on the f-file. Black's pawns are preventing White's king from making progress on the queenside. **38.a5!** creating a path for the king to invade. **38...bxa5+** 38...c5+ 39.dxc5 Rg4+ 40.c4 bxa5+ 41.Kxa5 Rxc4 42.Kb6 and White's king can escort the pawn to the promotion square. **39.Kxa5 c5** **40.dxc5 Rc6** **41.Kb4 Kg6** White's rook prevents Black's king from moving closer to the queenside. **42.Kc4 Kg5** **43.Kd5 Rc8** **44.c6** White's pawn can advance with the support of the king while Black's king can only watch the action from the g-file.
- 5-16 Black is behind a couple pawns in material but has the more centralized king. He can draw with **32...Ke4!** moving the king closer to White's king in an attempt to checkmate him on the back rank. **33.Rxc5 f4!** 33...Kf3? 34.Rxf5+ is winning for White. **34.exf4** 34.Rxg5 Kf3 35.h4 Ra1+ 36.Kh2 fxe3 37.Rf5+ Ke4 38.Rf4+ Kd3 39.Rf3 Kd2 40.h5 e2 41.Rf2 Ke3 42.Rxe2+ Kxe2 43.Kh3 is a roughly equal position with four pawns against a rook. **34...Kf3!** Black's king is safe from checks on the f-file. **35.h3 Ra1+** **36.Kh2 Ra2+** White's king can't escape the rook checks, resulting in a draw by threefold repetition.

5-17 Although White has three connected passed pawns, Black can draw with **35...Kb3! 36.Kg3** 36.a4 Kxb2 37.a5 Kxc3 38.a6 (38.Kg3 transposes to the game position below.) 38...Kd2 Black's king can't catch the a-pawn, but can arrive just in time to help the f-pawn promote. 39.a7 (39.Kg3 Ke2 40.a7 f2 41.a8=Q f1=Q is drawn.) 39...f2 40.a8=Q f1=Q+ is a draw. **36...Kxb2 37.a4 Kxc3 38.a5 Kd4!** staying on the a1-h8 diagonal and taking a step closer to the square of White's a-pawn and to the f-file. **39.a6** 39.Kxf3 Kc5 and Black's king is in the square of the a-pawn. **39...Ke3 40.a7 f2 41.a8=Q f1=Q** White promoted first, but Black can draw since the king and queen aren't lined up on a diagonal where White's queen can skewer them and win the queen.

5-18 White's isolated pawn on h2 is a weakness Black can exploit with the king. **26...Kg5** Black's king moves toward h2 forcing White's king into a passive position to protect it. **27.Ke2 Kh4 28.Kf1 Kh3 29.Kg1 e5** Black can trade the kingside pawns and win by moving his aggressively placed king to the queenside. **30.Kh1 b5** freezing the queenside pawns while saving a potential tempo for the a-pawn. **31.Kg1 f5 32.Kh1 g5 33.Kg1 h5 34.Kh1 g4 35.e4** 35.fxc4 fxc4 36.e4 h4 37.Kg1 g3 38.fxc3 hxc3 39.hxc3 Kxc3 40.Kf1 Kf3 41.Ke1 Kxe4 winning the e-pawn. **35...fxe4** 35...f4 is also winning for Black. **36.fxe4** 36.fxc4 hxc4 37.Kg1 e3 38.fxe3 e4 39.Kh1 g3 40.hxc3 Kxc3 wins for Black. **36...h4 37.Kg1 g3 38.fxc3 hxc3 39.hxc3 Kxc3 40.Kf1 Kf3 41.Ke1 Kxe4** winning the e-pawn.

5-19 White has an outside passed pawn. Black has a pawn majority on the kingside and the f-pawn is one step closer to promoting than White's a-pawn. **41...Kd5!** Black uses the king to prevent White's king from moving toward the kingside. 41...f4? 42.gxf4 gxf4 43.Kc4 moving into the square of the f-pawn. White will win because of the outside passed a-pawn. **42.Kb4** White loses the pawn race after 42.a4 f4 43.a5 f3 44.a6 f2 45.a7 f1=Q+. **42...Kd4!** Black prevents White's king from moving to the kingside. **43.Kb3 Kd3! 44.a4 f4 45.gxf4 gxf4 46.a5 f3 47.a6 f2 48.a7 f1=Q 49.a8=Q Qb1+ 50.Ka3 Qa1+** skewering Black's king and queen. Often the first player to promote has checks that win the game.

5-20 White has an outside passed pawn on h4. Black is a pawn ahead and has two passed pawns, but the king is blocked out of White's territory. **44...Bxh4!** Offering the bishop to lure White's king away from protecting f5. **45.Kxh4** Also winning for Black is 45.Bc2 Be1 46.Kf3 Kg5 47.Ke4 Bc3 48.Bd1 Kh4 49.Kf3 Kh3 since White's king will not be able to prevent both the e5 pawn from advancing and Black's king from moving forward and circling behind him on the way to the queenside. White's bishop must stay on the d1-a4 diagonal to prevent the a5 pawn from advancing. **45...Kf5 46.Kg3 Ke4** Black can win due to the active king position. **47.Kf2 Kd3 48.Ke1** 48.Be2+ Kd2 and neither White's king nor bishop can stop the a-pawn from promoting. **48...Kxc4 49.Kd2 Kb4!** protecting a4. 49...Kxb5? allows 50.Kc3 and White's king and bishop can prevent Black's pawns from promoting. **50.Kc2 e4 51.Bg4 a4 52.Bf5 e3 53.Bg4 c4 54.Be2 a3 55.Bf3 c3** and Black can promote one of the passed pawns.

Lesson 6

Basset Hound Solutions



- 6-1 The natural 46.gxh3 allows 46...Kf5 and White cannot defend the f4 pawn. The game would be drawn since White has a light-squared bishop and the rook pawn would promote on a dark square. White wins with **46.Bc2+! Bf5** 46...Kf6 47.gxh3 gives White a winning position since the f4 pawn stays alive. **47.Bxf5+ Kxf5 48.g3** and White wins due to the connected passed pawns.
- 6-2 White is ahead by two pawns. Black will try to draw by threefold repetition with a perpetual check. The simplest win is to give up the b6 pawn in order to trade queens with **46.Qa7+ Kc8 47.b7+ Qxb7 48.Qxb7+ Kxb7** White has an extra pawn with the king is closer to the kingside pawns. **49.Kf3 Kc6 50.Kg4 Kd6 51.Kf5 Ke7 52.e5 fxe5 53.Kxe5** with an extra pawn and a winning king and pawn ending.
- 6-3 The easiest way for Black to win is to simplify the position by trading rooks with **37...Rxe3 38.Kxe3**. Black creates a second passed pawn with **38...d5 39.cxd5 h3** Black's passed pawns are further advanced and further apart than White's. **40.Kf2** Black wins the pawn race and the game with **40...c4 41.g5 h2 42.Kg2 c3 43.g6 c2 44.g7 c1=Q 45.g8=Q Qg1+ 46.Kh3 h1=Q mate**.
- 6-4 Black is winning since he has an extra pawn on each side of the board. The simplest win is the combination trading rooks and knights with **37...Rxd4! 38.Kxd4 Nf5+ 39.Kc5 39.Kd3 Nxe3 40.Kxe3** leaves Black with an extra pawn on each side of the board. **39...Nxe3 40.fxe3 g5** Black wins due to the outside passed g-pawn.
- 6-5 Black has an outside passed pawn and simplifies by trading the minor pieces with **44...Bc6 45.Kg3 Bxf3 46.Kxf3 Kf5**. Black has a winning position due to the outside passed h-pawn. **47.Kg3 Ke4** Black's king can win White's queenside pawns while White's king has to move to the h-file to capture the outside passed pawn.
- 6-6 Black's pawn is pinned to the king. **47...Qg6+!** forking the king and queen and setting up a skewer to simplify the position by trading queens. 47...Qe2+, 47...Qc4+, 47...Qc6+, 47...Qc8+, and 47...Qa4+ lead to more complicated winning variations for Black. **48.Qxg6 b1=Q+ 49.Kc3 Qxg6** winning White's queen.
- 6-7 White's best move is **58.Qe7+ 58.Qg4+** is also winning. **58...Qf7 58...Kg8 59.Qe6+** forces a queen trade. 59...Qxe6 60.fxe6 Kg7 61.c4 Kg8 62.Kg6 gives White a winning king and pawn ending. **59.Qxf7+ Kxf7 60.Kxh6** Black's king will soon have to move allowing White's king to move to g6, attacking the f6 pawn and clearing the path for the outside passed h-pawn.
- 6-8 White wins a pawn and trades the queens and rooks by playing **44.Qxb7+! Rxb7 45.Rxb7+ Ke8 46.Rxf7 Kxf7 47.a4** Black's king is currently outside the square of White's a-pawn and can't stop both White passed pawns.
- 6-9 Black simplifies the position by trading the queen for White's rook and bishop with **57...Qd3+ 58.Kb2 Qxd6 59.exd6 Kxf8** Black's king is in the square of the d6 pawn and Black has an outside passed pawn on the h-file.
- 6-10 White has six (!) isolated pawns. The e6 and g6 pawns are passed and close to promoting. **50.Qh7+ 50.Kg1** avoiding checks from Black's queen on the next move is also winning. **50...Kf8 51.Kg2** bringing the king a step closer to the center. White doesn't have to play 51.Qf7+ and trade queens immediately. Black's queen has to defend against the mate threat on f7 as well as prevent White's passed pawns from advancing. **51...g4 51...Qxe6 52.g7+** and White can promote the pawn. **52.Qf7+ Qxf7 53.gxf7 d5 54.Kg3 dxe4 55.Kxg4 Ke7 56.Kg3** White's king threatens to move to f2 and e3 to hunt down Black's e-pawns. Black's king has to defend the f8 promotion square.

Chess Detective Solutions



- 6-11 Due to the more centralized king, White can win by trading pieces with **47.Rxe8+** Waiting to trade pieces on e8 by playing **47.Bh5** with the idea of **48.Kg4** is also winning. **47...Rxe8 48.Bxe8 Kxe8** White has a winning position due to a superior king position. **49.Kg4 Kf8 50.Kf5 Kf7 51.c4 Ke7 52.c5** Also winning is **52.Kg6 Ke6 53.Kxh6 Kf6 54.g4** since Black will run out of pawn moves and the king will have to abandon the g5 pawn. **52...Kf7 53.g3 a5 54.a4 Ke7 54...Kg7 55.Ke6** and White can then win the pawn on c6 and promote the c5 pawn. **55.Kg6** winning the kingside pawns.
- 6-12**37...Rf1+!** Black forces a trade of major pieces to reach a winning king and pawn ending. Also winning, but more complicated is **37...Rh2. 38.Qxf1 38.Kg4 h5+ 39.Kxg5 Qg6+ 40.Kh4 Rh1** mate **38...Qxf5+ 39.Kg2 Qxf1+ 40.Kxf1** White's king has been chased to the back rank. **40...axb4 41.axb4 Kf6 42.Kf2 h5 43.Kf3 Ke5** Besides threatening to create an outside passed pawn with the pawn majority on the kingside, Black threatens to move the king to the queenside to attack White's queenside pawns.
- 6-13Black would like to trade queens and promote the a2 pawn. Black's simplest win is **55...Qe2+ 56.Kh1 56.Kg1 Kf3 57.Qc3+ Qe3+** trades queens. **56...Qe4+ 56...Kg3 57.Qc3+ Qf3+ 58.Qxf3+ Kxf3** also wins. **57.Kh2 Qc2+ 58.Kg1 Qb1+** trades queens and promotes the pawn. Checkmate will soon follow.
- 6-14White simplifies to a winning endgame by playing **30.Rxg7+!** Not as strong, but also winning is **30.Qxb8 Bxd5 31.Rxg7+ Kxg7 32.Qc7+.** **30...Qxg7 31.Qxb8 Bxd5 32.Ra7** pinning Black's queen to the king and preventing **32...Qxg2** mate. **32...e2** threatening to promote the pawn with mate. **33.Rxg7+ Kxg7 34.Qa7+! Kf6 35.Qa1** retreating the queen to prevent Black's pawn from safely promoting. White is ahead a queen to a bishop with an easily winning endgame position.
- 6-15White is ahead by three pawns. The only challenge is to escape checks from Black's queen. **55.Kf6!** wins because White threatens mate by moving the queen to d8 or f7. **55...Ke8 55...Qb2+ 56.Qe5** attacking Black's queen with the idea of **57.Qb8** mate or **57.Qe7+** followed by **58.Qg7** mate. Trading queens gives White an easily winning position with the extra pawns. **56.Qd6** with the threat of **57.Qe7** mate. Stopping the mate threat by playing **56...Qxe3** or **56...Qb2+** allows White to play **57.Qe5+** and trade queens with a winning position.
- 6-16White is ahead the exchange in material and has a pawn majority on the kingside. Black has a passed pawn on a2 which White's king or rook must prevent from promoting. White can trade the rook for Black's bishop and a-pawn with **42.Ra1** and **43.Rxa2** and have an extra pawn in the king and pawn endgame. Better is to first weaken Black's kingside pawns by playing **42.h5** with the threat of **43.h6. 42...gxh5** Black's kingside pawns are now isolated. **43.Rh1 Ke7 44.Rxh5 Kd7 45.Rh1** White also wins with other rook moves like **45.Rh6. 45...Kc6 46.Ra1 Kc5 47.Rxa2 Bxa2 48.Kxa2 Kd5 49.Kb3** White's king can move to the kingside to help promote one of the pawns. **49...Ke4**, trying to capture the f4 pawn, loses to **50.e6** or **50.g6**.
- 6-17White is ahead two pawns. Trading queens and bishops gives White a winning king and pawn endgame. Black would like to draw by threefold repetition with a perpetual check or checkmate White's king. **42.Bg7+** forcing a bishop trade. **42...Kxg7 42...Ke8 43.Bf6** threatens mate and forces Black to protect the bishop with the queen. White could then trade the queens and bishops and win the king and pawn ending. **43.Qxe7+ Kh6 43...Kg8 44.d6** and the d-pawn will soon promote. **44.Qh4+ Kg7 45.Qd4+** protecting both passed pawns and preventing checks on the b1-a7 diagonal. The d-pawn can now advance with the queen's support from behind. **45...Kf7 46.d6 Qc2 47.d7 47.Qa7+ Ke6 48.Qe7+ Kd5 49.d7** threatening to promote with check is also winning. **47...Qc1+ 48.Kf2 Qc2+ 49.Kf3 Qc6+ 50.Kg3 Qc7+ 51.Qf4+ Qxf4+ 52.Kxf4 Ke7** Black wins the d7 pawn but loses the game due to White's outside passed b-pawn.

- 6-18 White is a pawn ahead but has an exposed king that needs to escape checks from Black's queen. White would like to trade queens and head into a winning king and pawn ending. White wins with **54.f6+! Ke8** 54...Kxf6 55.Qxd6+ Kf7 56.Qf4+ trading queens or 54...Kf8 55.Qxd6+ Kg8 56.Qe5 Qg1+ 57.Kf5 and White's king can move further into Black's territory via e6 to hide from checks and help the pawns advance. **55.f7+ Ke7** 55...Kf8 56.Qxd6+ Kxf7 57.Qf4+ forking the king and queen. **56.Qxb7+ Kf8 57.Qa8+** 57.Qxa7 wins another pawn, but leaves the queens on the board, keeping the position more complex. **57...Kxf7 58.Qf3+** forking the king and queen. **58...Qxf3+ 59.Kxf3 Ke6 60.Ke4** White is a pawn ahead with a winning king and pawn endgame.
- 6-19 White's pieces are lined up on two dark-squared diagonals. **38...Rxe3!** Simplifying is the best choice of several moves that give Black an advantage. **39.Rxe3 Rxe3 40.Kxe3** 40.Rd6 Rf3+ 41.Ke2 Kf7 leaves Black ahead a bishop and a pawn. **40...Bg5+** skewering the king and rook to win back the exchange. **41.Ke2 Bxd2 42.Kxd2 f4!** With the kingside pawn majority, Black threatens to create a protected passed with 43...f3. **43.gxf4 g3** creating a winning passed pawn.
- 6-20 White is threatening a threefold repetition draw with 58.Qxf7+. Black wants to promote the b2 pawn and would like to force a queen trade with a queen check on g5 that forks White's king and queen. If White's king moves to the back rank, Black can promote the b-pawn with check. **57...Qe4+** 57...Qc4 or 57...Qc7 protecting the f7 pawn also win, but it is more efficient to find a forcing win involving checks. **58.f3** 58.Kh2 Qf4+ 59.Kg2 Qg5+ or 58.Kg3 f4+ 59.Kh4 (59.Kh2 Qg6 protects the f7 pawn while also protecting the b1 promotion square.) 59...f3+ 60.Kh5 (or 60.Kg3) 60...Qg6+ trading queens. **58...Qe2+ 59.Kg3** 59.Kg1 (or 59.Kh1) 59...b1=Q mate **59...Qe1+ 60.Kf4** 60.Kg2 Qd2+ 61.Kg3 Qg5+ trades queens and the pawn can promote. **60...Qd2+ 61.Kg3 Qg5+** The b2 pawn promotes after the queens are exchanged.

Lesson 7

Basset Hound Solutions



- 7-1 Black has two extra pawns on the queenside and traded his queen for a rook to line up White's queen and king for the pin. White forces a draw with **78.Kh4! Rxf3 stalemate**. Any move other than 78... Rxf3 allows White's queen to live, leaving White with a material advantage and a winning position.
- 7-2 White is trying to force the queens off the board to win the king and pawn endgame. **45...Ka8! 46.Ka6 46.Qxc7 stalemate 46...Qc8+ 47.Ka5 Qc7 47...Qc3+ 48.Ka6 Qc8+ 49.Ka5 Qc3+ draws by threefold repetition. 48.Ka6 Qc8+ repeats the position.**
- 7-3 **44...b5+! 44...Kc6? 45.Kb4 Kc7 46.Kb5 Kd7 (46...b6 47.a6 Kd7 48.Bb8 Kc8 49.Bf4 Kd7 50.Kxb6 and the pawn can promote.) 47.Bb8 Kc8 48.Bg3 Kd7 49.Kb6 Kc8 50.Bf4 Kd7 51.Kxb7 wins for White. 45.axb6+ 45.Kxb5 Kb7 is a draw because White's bishop is not on the same color as the rook pawn's promotion square. 45...Kb7 46.Kc5 Ka8 46...Ka6? 47.Kc6 wins for White. Black's king can move back and forth between b7 and a8. With Black's king on a8, White cannot move the king closer due to stalemate. 47.Bb8 Kxb8 48.Kc6 Kc8 Black draws by gaining the opposition.**
- 7-4 Black is behind in material and appears to have no useful checks. Black saves the game by playing **54... Rxc3+! 55.Kxc3 55.Kh4 Rg4+ 56.Kxc4 Qd7+! 57.Qxd7 stalemate 55...Qe5+!** forking White's king and queen. White is forced to play **56.Qxe5 stalemate** or lose the queen.
- 7-5 White has the advantage of two extra connected passed pawns. Black draws by playing **38...Ra1+ 39.Rf1 Rxf1+ 40.Kxf1 Bh3!** pinning White's g2 pawn to the king. **41.gxh3** After any other move for White, Black can sacrifice the bishop for the g2 pawn. The game is drawn because White's rook pawns promote on the colored square opposite that of White's bishop.
- 7-6 White has a material advantage of a queen and pawn to a rook and bishop. Black draws by sacrificing the bishop with **59...Bxc5! 60.Qxc5+ Kh7** Black has a fortress position that prevents White from invading. Black's rook can move between e6 and h6 and king can move between g7 and h7 to prevent White from making progress.
- 7-7 White has an extra rook and pawn, superior king position, and mating possibilities on Black's back rank. Black draws with **52...d1=Q 53.Rxd1 Rd6+!** A zwischenzug preventing back rank threats by forcing White's king to move. **54.Kg5 54.Rxd6 stalemate 54...Rxd1** and Black can draw against the doubled isolated rook pawns.
- 7-8 White can draw with the rook vs. queen ending by playing **59.Rh2+ Kg4 60.Rg2+ Kh3 60...Kf4 61.Rf2** pinning the queen to the king. **61.Rh2+** Black can't make progress. **61...Kg3 62.Rh3+! Kxh3 stalemate.**
- 7-9 Black has the advantage due to the advanced connected passed pawns. White forces a draw with **43.Rh1!** moving to the h-file where Black's pawns can't shield rook checks from the kingside. **43.Ra1? d3+ 44.Kf1 Kf3** with the threat of **45...e2 mate. 43...d3+ 44.Kf1 Kf3 44...d2 45.Ke2** blockading Black's pawns. **45.Rh3+ Ke4 46.Rh8** moving the rook to the 8th rank where it can check Black's king from behind. **46...Kd4 47.Rd8+ Kc3 48.Rc8+ Kd2 49.Re8 e2+ 50.Kxf2** and the position is drawn.
- 7-10 Black threatens to promote the pawn after **45...Rf1+ 45.Ra7+ Kb3** White's king has no legal moves. **46.Rf7!** blocking Black's rook on the f-file. **46...Rc8 46...Rxf7 stalemate 47.Rc7 Rh8 48.Rh7 Ra8 49.Ra7** Whichever file Black's rook moves to, White's rook will follow, eventually leading to a threefold repetition draw. If Black captures White's rook, it will be stalemate.

Chess Detective Solutions



- 7-11 Black has dangerous passed pawns and his king is in position to support the queenside pawns. White plays **58.Rfxd3! Qxd3 59.Rxa4+! Kd5 60.Rxh4 Ke5 61.Rh3** White builds a fortress on the 3rd rank and can draw by moving the rook between h3, e3, and f3 and the king between g2 and h2 at the appropriate time.
- 7-12 White's knight is pinned to the king. Black would like to trade the queens and minor pieces and win with the extra pawns. **52.Qc3+!** White trades queens to force a drawn endgame where he can sacrifice his knight for Black's d-pawn. **52...Qxc3 53.bxc3+ Kc4 53...Kxc3 54.Ne4+** followed by **55.Nxd6 Bxd6** is a draw because Black's bishop is not on the color of the promotion square. White must retain the d-pawn in order to win. **54.Ne4 d5 55.Nf6 Be5 56.Nxd5 Kxd5** The position is drawn.
- 7-13 Black has the advantage due to the advanced connected passed pawns. **68.Rf3!** White threatens to draw by insufficient mating material by playing **69.Rxf2 gxf2 70.Kxf2. 68.Ra4 Kf4 69.Ra3** also draws since Black cannot make progress. **69...g2+ 70.Kxf2. 68...g2+** Capturing the rook with either the bishop or king is stalemate. **69.Kxg2 Bxf3+ 70.Kxf2** with a draw by insufficient mating material.
- 7-14 Black has two extra connected passed pawns on the kingside. Note that White's king has no legal moves and it would be stalemate if the rook on d6 were off the board. White draws with perpetual check by playing **60.Rd7+ Kh6 61.Rh7+! Kg5 61...Kxh7 stalemate 62.Rxh5+ Kf6 63.Rf5+ Kg7 64.Rf7+ Kh6 65.Rh7+ Kg5 66.Rh5+ Kf4 67.Rf5+** Black's king cannot escape the annoying checks. **67...gxf5 stalemate.**
- 7-15 **42.Ng3** is the only move that prevents the pawn from promoting. **42.Nxf4? f1=Q+** wins for Black. **42...Bd6 42...Bxg3 stalemate 43.Nf1 43.Kh2? Bxg3+ (43...f1=Q? stalemate) 44.Kh3 f1=Q mate 43...Ke2 44.Kg2 Bf4 45.Kh1 Kf3 45...Kxf1 stalemate 46.Ng3! Be3 46...Bxg3 stalemate or 46...Kxg3 stalemate. 47.Nf1** and Black can't make progress. **47.Kh2 Bf4 48.Kh1** also draws.
- 7-16 White is ahead two pawns, but the bishop is not on the color of the rook pawn's promotion square. **34...Rxd7+!** White can draw the bishop ending with the rooks off the board. **35.Kxd7 Bg4+** Black is willing to sacrifice the bishop for the e-pawn since White cannot win with the rook pawn. Black's bishop can only stop the e-pawn on e6 or e8. **36.Kd8 Kh6 37.Be8 Kg7 37...Bxh5? 38.Bxh5 Kxh5** and White can promote the e-pawn. **38.Ke7 Bd1 39.Bf7 Be2 40.h6+** drawing Black's king further away from the e-file. **40.e6 Bc4** allows Black to sacrifice the bishop for the e-pawn. **40...Kxh6 41.Kf6** trapping Black's king on the h-file. **41...Bg4 42.Bg6 Bc8 43.Bf5 Ba6 44.e6 Bc4 45.e7 Bb5 46.Kf7 Kg5 47.Bc2** The game is drawn since White cannot force Black's bishop away from defending the e8 promotion square.
- 7-17 Black's exposed king has no legal moves and is in danger of being checkmated by White's queen and rook. Black saves the game by sacrificing all three (!) pieces to force a stalemate starting with **41...Rxh3+! 42.Kxh3 Qh1+ 43.Kg3 Nh5+! 44.gxh5 Qf3+! 45.Kh2 Qg2+ 46.Kxg2 stalemate.**
- 7-18 White is ahead the exchange and three pawns, but the king is exposed and Black has the potentially lethal combination of a queen and knight. **32...Qc1+ 33.Kd3 33.Kb3 Qxd2 34.Qxc7+ Kg6** with a roughly equal position. White will look for perpetual checks to draw by threefold repetition since the pawns are not far advanced and Black's queen and knight have both mating potential and the ability to capture White's extra pawns. **33...Nf4+ 34.Ke3 Ng2+ 35.Ke2 Nf4+ 36.Ke3 Ng2+** repeating the position.
- 7-19 Since White can't immediately stop Black's a-pawn from promoting, attacking Black's king is the only hope. **46.Bf8! gxh6 46...a1=Q 47.Bxg7+ Qxg7 48.hxg7+ Kxg7 49.Kg5** draws. **47.Be7! Kg7 47...a1=Q 48.Bf6+! Qxf6 stalemate 48.Bc5! Kf6 48...a1=Q 49.Bd4+! Qxd4 stalemate or 48...a1=B 49.Be3 Be5 50.Bxh6+ Kh7 51.Bd2 Bxh2 52.Kh4 Be5 53.Kxh3** is drawing. **49.Bd4+ Ke6 50.Kh4** retreating to defend against the passed f-pawn. **50...Kd5 51.Bb2 Ke4 52.Kg3! Ke3 52...f4+** allows **53.Kf2**, moving in front of the f-pawn. **53.Bc1+ Ke2 54.Bb2 Kf1 55.Bd4 f4+ 56.Kxf4 Kg2**

57.Ke3 Kxh2 58.Kf2 The game is drawn. Black's king won't be allowed to move off the h-file and the a2 pawn can't safely promote because of the bishop.

7-20Black is threatening to create an outside passed pawn on the h-file. **39.f4!** 39.f3? gxh3+ 40.Kxh3 Kg5 41.Kg2 Kf4 is winning for Black because of the outside passed pawn on h4. **39...gxf3+** 39...exf4? 40.e5 f3+ 41.Kg1! f2+ 42.Kg2 (42.Kxf2? g3+ 43.Kf3 Kg5 and Black's king gets into the square of White's center pawns.) 42...Kg5 (42...g3 43.d6! or 42...gxh3+ 43.Kxf2 Kg6 44.e6 creates a winning protected passed pawn on e6.) 43.hxg4 is winning for White. **40.Kxf3 Kg5 41.Ke3** The game is drawn since neither king can invade the opponent's territory to make progress.

Lesson 8

Basset Hound Solutions



- 8-1 Black made a mistake by advancing the pawn. White wins by trapping Black's king in front of the pawn and checkmating him with the knight by playing **59.Kc2 Ka1 60.Nc1 a2 61.Nb3 mate**.
- 8-2 If Black's king moves, White's king can invade. Black's bishop has three squares available on the a4-e8 diagonal and only two squares on the h5-e8 diagonal. White's bishop can maneuver on the b1-h7 diagonal to put Black in zugzwang several different ways. A couple winning variations that outmaneuver Black's bishop are **45.Be4 Bf7 46.Bc2 Be8 47.Bd3** and **45.Bc2 Bf7 46.Bb1 Be8 47.Bd3**. Black will lose a pawn if the bishop moves and White's king can invade if Black moves the king.
- 8-3 White has an extra pawn, but Black's pawn is on the 7th rank. Black prevents White's knight from moving to c3 to protect the d1 promotion square by playing **34...Na3+! 35.Nxa3 Ke2** White's knight cannot attack d1 in one move to prevent the pawn from promoting.
- 8-4 White's best move is **42.Be5!** trapping Black's knight on the edge of the board. **42...Kd7 43.Kc5 Ke7 44.Kc6 Kd8 45.d6 Kc8 46.d7+ Kd8 47.Kd6** Also winning is **47.Bc7+ Ke7 48.d8=Q+, 47...Nf4 48.Bf6 mate**.
- 8-5 White wins with **40.Ne6+!** **40.gxh7?** **Kg7** is a draw because Black's king can move between g7 and h8. If the knight moves, Black can capture the pawn and White's king cannot get close enough to help the pawn promote without stalemating Black's king. **40.Nxh7+?** **Kg7 41.Nf8 Kxf8** and Black's king can also win the pawn. **40...Kg8 41.g7 Kf7 41...h5 42.Kd3** and White's king is in the square of the h-pawn. **42.Kd4 Kg8** If Black captures the knight, the pawn promotes. **43.Ke5 Kf7 44.Kf5 Kg8 45.Kf6 h5 46.Ng5 46.Kg5** with the idea of capturing Black's pawn also wins. **46...h4 47.Kg6 h3 48.Ne4 h2 49.Nf6 mate**.
- 8-6 Black needs to chase White's bishop away from protecting e2 in order to promote the pawn. **45...Bc2 46.Bg4 46.Be2 Bd3 47.Bxd3 Kxd3 48.Ke1 e2 49.Kf2 Kd2** and the pawn can promote. **46...Bd1** Black's pawn will be able to advance to e2 after White's bishop leaves the d1-h5 diagonal.
- 8-7 Black has an extra pawn and a superior king position. Black traps and checkmates White's king with **49...Kg1! 50.Nxh5 Nf2 mate**.
- 8-8 White has drawing chances in this endgame since the players have opposite-colored bishops. White draws with **35.Bd6!** preventing **35...Kc5. 35...Be4+** White successfully blockades the pawns on the dark squares after **35...b3+ 36.Kb2 Bd5 37.Bb4. 36.Kb2 c3+ 36...b3 34.Bb4** prevents the c-pawn from safely advancing. **37.Kb3 c2 38.Bf4** White draws since Black's pawns cannot safely advance further.
- 8-9 Black has the disadvantages of a passively placed king and pawns stuck on the color of the bishop. White's pawns are mostly on dark squares and don't have to be defended from attacks by the bishop. White wins with **45.Nf4 Bg4 46.b4** Black is in zugzwang. **46.a3** and **46.b3** also put Black in zugzwang. **46...Kd7 47.Kb6** White's king can win Black's queenside pawns.
- 8-10 White's best move is **52.Be5!** Other moves like **52.Kd5 d3 53.Be1** also win since White has two advanced passed pawns. **52...Bxe5 52...Be7 53.Bxd4** is hopeless for Black. **53.e7** and Black can't stop White's pawn from promoting.

Chess Detective Solutions



- 8-11 White has a couple extra pawns against a bishop and the potential to create a passed pawn on the kingside by sacrificing the f- or h-pawn at the right time. **57.Kb6!** breaking the pin. 57.Kxa6? Bxc6 58.Kb6 Bf3 59.a6 Bxh5 60.a7 Bf3 is a winning position for Black. **57...Kd8** 57...Be4 58.h6 gxh6 59.f6+ Kxf6 60.c7 Bf5 61.Kxa6 h5 62.Kb6 h4 63.a6 and White will be the first to promote. 57...Kd6 58.c7 Kd7 59.f6 gxf6 60.h6 Be4 61.h7 Bxh7 62.Kb7 Be4+ 63.Kb8 and White's c-pawn can promote. **58.f6 gxf6 59.h6 Be4 60.Kb7!** Black is in zugzwang. **60...Ke7** 60...f5 61.h7 and the pawn promotes. **61.Kxa6 Kf7 62.Kb6** and Black can't stop all of White's passed pawns.
- 8-12 White's knight is preventing Black's pawn from promoting. **48.Na2!** blocking Black's pawn and forcing Black's king to retreat. **48...Kf8** 48...Kg8 49.Kg6 Kh8 50.Nb4 Kg8 51.h7+ Kh8 52.Nc6 a2 53.Ne5 a1=Q 54.Nf7 mate **49.Kf6!** gaining the opposition and an important tempo. 49.Kg6? Kg8 50.h7+ Kh8 51.Nb4 a2 52.Nxa2 stalemate. Losing is 52.Nc6? a1=Q 53.Nd8 Qg7+. **49...Kg8 50.Kg6 Kh8 51.Nb4 Kg8 52.h7+ Kh8 53.Nc6 a2 54.Ne5 a1=Q 55.Nf7 mate.**
- 8-13 White needs to chase Black's bishop away from defending c6 in order to advance the pawn. **44.Bc6 Be2** 44...Bh5 45.Bd5 Be8 46.Be6 Ke3 47.Bd7 chasing Black's bishop off the a4-e8 diagonal so the pawn can advance. **45.Bd5 Bb5 46.Be6 Ke3 47.Bd7 Bf1** 47...Ba6 48.c6 Kd4 49.Be6 Kc3 50.Kc5 Kd2 51.Kb6 is winning for White. **48.c6 Kd4 49.c7 Ba6 50.Kc6 Kc3 51.Kb6** and after Black's bishop retreats the pawn can promote.
- 8-14 Black's king is in the square of the h6 pawn and he has a pawn majority on the queenside. **48...Nc3+!** 48...Kf7 and other knight moves are also winning. **49.Ka1 Kf7 50.h7 Kg7** White is in zugzwang because the bishop needs to protect the h7 pawn and attack b3 to stop Black's b-pawn from advancing. **51.Bd3 b3!** 51...cxd3? 52.h8=Q+ Kxh8 stalemate **52.axb3 cxb3** Black can't stop the threat of **53...b2 mate.**
- 8-15 White has an extra passed pawn in this opposite-colored bishop ending. White's passed pawns are also far advanced. **45.Bd3!** freeing White's king from guarding the a6 pawn, but allowing Black's h-pawn to advance. **45...h5 46.Kc6 h4 47.Kd7 h3 48.c6 h2** 48...Be5 49.Bf1 h2 50.Bg2 Kb8 51.Bh1 Ka7 52.c7 is winning for White. **49.c7 h1=Q 50.c8=N+! Kb8** 50...Ka8 51.Be4+ Kb8 52.a7 mate **51.a7+ Kb7 52.Be4+ Ka6 53.a8=Q+ Kb5 54.Qb7+ Kc4 55.Qxb2** leaving White ahead a bishop and knight in material.
- 8-16 Black is ahead a pawn, but the king is trapped on the a-file. **50.c5!** 50.a3? c5 51.a4 b5 52.cxb5 axb5 53.axb5 is a draw. **50...Ne6** 50...bxc5 51.Nc4+ Kb5 52.a4 mate or 50...b5 51.a3! b4 (51...Ne6 52.Nb7 mate) 52.axb4 mate. **51.Nb7+ Kb5 52.a4 mate.**
- 8-17 Black has a bad bishop because all his pawns are on the color of the bishop. White's bishop has freedom to attack Black's vulnerable pawns. Black would be in zugzwang if it were his move. There are several ways White can lose a move. **39.Be2** White can put Black in zugzwang after forcing him to defend all three of the isolated pawns at different times. **39...Be8** White's king can invade if Black's king moves. 39...Bg6 40.Bd3 Bh7 41.Bf1 Bg6 42.Bg2 Bf7 43.Bf3 and Black is in zugzwang. **40.Bd3 Bg6 41.Bc2! Bh7 42.Bb3 Bg8 43.Bd1 Bf7 44.Bf3** and Black is in zugzwang.
- 8-18 White has the advantage since all of Black's pawns are on the color of the bishop. White doesn't have to worry about defending his pawns and can focus attention on invading Black's position in an attempt to win Black's pawns with the king and knight. **53.Nc4** White's knight heads for e5 to attack the g6 pawn. **53...Ba2 54.Ne5+ Kg7 55.Kd4** White's king moves forward to invade Black's position. **55...Bb3 56.Nc6 Ba2** Black can only wait and hope White can't break in. **57.Ke5 Kf7 58.Kd6 Bb3 59.Ne5+ Kg7 60.Ke7** White's king moves to outflank Black. **60...Ba2 61.Nd7 Bb3 62.Nc5 Ba2 63.Ne6+ Kg8** 63...Bxe6 64.Kxe6 Kg8 65.Kf6 Kh7 66.Kf7 Kh8 67.Kxg6 is winning for White. **64.Kf6 Kh7 65.Nf8+ Kg8 66.Nxg6 Bb1 67.Ne7+ Kh7 68. Nxf5** and White wins by advancing the passed pawns.

8-19 Black wins with the ingenious **59...g5! 60.f5** clearing the h2-b8 diagonal for the bishop to defend h2. **61...Bxf5 62.Bd6 Kxe3 63.Kxb3 d4** and White can't stop both passed pawns. **60...d4+ 61.exd4** Black's bishop not only protects the b-pawn but also defends squares in front of both of White's passed pawns on the a2-g8 diagonal. **61...Kg3 62.Ba3 Kxh4** Black's bishop is on the color of the rook pawn's promotion square. **63.Kd3 Kxg5 64.Ke4 h4 65.Kf3 Bd5+ 66.Kf2 Kf4 67.Kg1 Ke4 68.Kh2 Be6 69.Bb2 Bd7** blocking the path of the d-pawn. Black's king can move to the queenside and force White to give up the bishop for the b-pawn. Black's king can then move to the d-file and capture White's last pawn before heading to the kingside to help promote the h-pawn.

8-20 White has the advantage of a good knight vs. bad bishop in this ending. **41.f5!** clearing f4 for the knight. **41...f6 41...gxf5 42.Nf4 f6 43.Nxd5+ Kd8 44.Nxf6 Bg6 45.Kf4 c6 46.Kg5** and White can win more pawns. **42.Nf4 fxe5 43.dxe5 gxf5 44.Nxd5+ Kf7 44...Kd7 45.Kf4 Bf7 46.Nc3 Bb3 47.Kxf5** gives White a winning position with an extra pawn, better placed king, and potential outside passed pawns on the kingside. **44...Ke6 45.Nxc7+ Kd7 46.Nxe8 Kxe8 47.Kf4** with a winning king and pawn ending. **45.e6+ Kg6 45...Kxe6 46.Nxc7+ Kd7 47.Nxe8 Kxe8 48.Kf4** wins for White. **46.Nxc7 Bc6 47.Kd4 Kf6 48.Kc5 Be4 49.Kd6** White's king can help the e-pawn promote.

Lesson 9

Basset Hound Solutions



- 9-1 Black's rook needs to stay on the h-file to keep White's rook on the promotion square in order to protect the pawn. If White's rook can move out of the way and gain a tempo by creating a big threat, the pawn can promote. Since White's pawn and Black's king are lined up on the same rank, White threatens 39.Ra8. After 39...Rxh7, White can skewer Black's king and rook with 40.Ra7+. Therefore, Black plays **38...Kb7!** to prevent White's rook from safely moving to a8. Other moves win for White: 38...Kd7 39.Ra8 Rxh7 40.Ra7+, 38...Kc6 39.Rc8+ Kd7 40.h8=Q, or 38...Rh3 39.Ra8. If White tries to move the king toward g7 to protect the pawn so the rook can move out of the way with **39.Ke3 Rh2 40.Kf4 Rh1 41.Kg5**, Black can draw by checking White's king from behind with the rook.
- 9-2 White's king and knight are separated. Black wins the knight by playing **45...Ra7! 46.Kg3 Rf7**.
- 9-3 Black's king and pawn block White's pawns. White forces mate with **40.Ra6+! bxa6 41.b6+ Ka8 42.b7+ Ka7 43.b8=Q mate**.
- 9-4 Black is hoping to promote the pawn. Since White's king is too far away to help, it is up to the rook to stop the pawn. White wins with **53.Rg5!** cutting off Black's king from moving forward to escort the pawn. **53...a4 54.Kg7 a3** If Black doesn't push the pawn and moves the king back and forth between a6 and b6, White's king will eventually arrive on the queenside and win the pawn. **55.Rg3** Black's king is too far away to protect the pawn. **55...a2 56.Ra3** winning the pawn.
- 9-5 White would like to promote the a-pawn, but the rook has to defend the pawn from the promotion square. White wins with **69.Kb4** threatening to capture the b-pawn. **69...c6** the only safe way to defend the b-pawn. White can now play **70.Rh8!** threatening to promote the pawn. **70...Rxa7 71.Rh7+** skewering Black's the king and rook.
- 9-6 Black threatens 43...Rb7+ chasing White's king further away from the pawn and allowing Black to achieve the Lucena position. White draws with **43.Rh2+! Ke3 44.Rh3+ Ke2 44...Kd4 45.Rh4+** is drawing. Not 45.Kc1? Kc3 handing Black the win. **45.Rh2+** and Black's king cannot escape the checks while staying near the pawn. The game is drawn.
- 9-7 Black has numerous mate threats as White's king is surrounded in Black's territory. Black's king is more centrally located, but also in danger from White's pieces. White forces checkmate with a couple sacrifices by playing **50.Nh5+! Rxh5 51.Rxg6+ Kxg6 52.Re6 mate**.
- 9-8 White is threatening to promote the pawn. Black saves the game with **43...Rc4+! 44.Kg5 Rh4! 45.Kxh4 g5+** clearing the g7 square for the king and gaining a critical tempo with the check. **46.Kxg5 Kg7** Black can win the h7 pawn and the game with the extra queenside pawns.
- 9-9 White would like to promote the pawn and also has potential checkmate threats on the back rank. Black saves the game with **50...Rc8! 51.b6 51.Re7 Rf8 52.Rg7 Rc8** is drawing since White cannot make progress. **51...Rg8 52.Rb7+ Ka8** White's king must not be allowed to move to a7. **53.Ra7+ Kb8 54.Rh7 Rf8 55.b7 Rf6+ 56.Kb5** The game is drawn since White cannot make progress.
- 9-10 White's rook is trapped in front of the pawn which it must protect. **44...Kg7! 44...Kxg6? 45.Rg8+** and the pawn can promote. **45.Kg3 Rc2 46.Kf4 Rc1 47.Ke5 Rc2 48.Kd6 Rd2+ 49.Ke7 Re2+** The game is drawn since White cannot make progress.

Chess Detective Solutions



- 9-11 **50...Kc7!** Black's only drawing move. Black cannot allow White's king to escape from the corner. 50... Rb1? 51.Rb8 Rf1 52.Kb7 Rb1+ 53.Ka6 Ra1+ 54.Kb6 Rb1+ 55.Kc5 and White's king can move back toward Black's rook to escape the checks and then promote the pawn. **51.Rb8 Rh2 52.Rb1 Rh8+ 53.Rb8 Rh1 54.Rg8** is drawn because Black will not allow White to move the king out of the corner in order to promote the pawn.
- 9-12 Both players have centralized kings, but Black's king is surrounded. White prevents Black's king from moving to e6 by playing **43.d5!** threatening 44.g4 mate. **43...e4** clearing the e5 square for the king. **44.f4 h5 45.h3 Rb5 46.g4+ hxg4 47.hxg4 mate.**
- 9-13 If Black's pawn were not on c7, White could play 63.Rh8 and fork Black's king and rook if Black's rook captured White's pawn on a7. **63.b6!** White entices Black's c7 pawn to move in order to clear the 7th rank. White threatens 64.b7 and could now move the rook since the a7 pawn is protected. **63...Kc6 63...cxb6 64.Rh8** setting up the skewer. **64.Rc8 Kxb6 65.a8=Q** promoting the pawn.
- 9-14 White was the first to promote a pawn and Black had to sacrifice the rook for White's new queen. White now needs to retreat the king as quickly as possible to stop Black's passed pawn. Black's king blocks him from retreating. **81.Re7!** Black must play **81...Kf4** allowing White's king to move toward Black's pawn with **82.Ke6**. After **82...e3**, White plays **83.Kd5** and will quickly retreat down the d-file. **83...Kf3 84.Kd4 e2 85.Kd3** and White can win the pawn.
- 9-15 Black is a pawn ahead and has connected passed pawns. White saves the game with **52.Rc1!** to prevent Black's pawn from promoting. 52.a7? c1=Q+ 53.Rxc1 Rxc1+ 54.Kd3 Rc8 protecting the promotion square. **52...Rxc1 52...Ka5 53.a7 Rxc1 54.a8=Q+ Kb6 55.Kxb3** or **52...Ka3 53.Kc3 Ka4 54.a7 Rxc1 55.a8=Q+ Kb5 56.Kxb3 Rb1+ 57.Kxc2** with a queen vs. rook endgame. **53.a7 Ka3 54.Kc3 Ka4 54...Ka2 55.a8=Q+ Kb1 56.Qa3** with mate to follow. **55.a8=Q+ Kb5 56.Kxb3** and White can win the c2 pawn resulting in a queen vs. rook ending.
- 9-16 Black draws with **74...Kg8!** 74...Ke8? loses due to 75.Rd2 Rf3 76.Ra2 Rf1 77.Ra8+ Kd7 78.Rf8 Rf2 79.Kg7 Rg2+ 80.Kf7 and White can advance the pawn and achieve the Lucena position. **75.Rd8+ Kh7 76.Rf8 Ra1!** planning to check from the a-file. **77.Re8 Rf1 77...Ra6+?** 78.Kf7 and White will be able to advance the pawn. **78.Re5** threatening 79.Kf7 and 80.f6. Other moves are no better. **78...Kg8 79.Ke7 Kg7 80.Ke6 Ra1** threatening to check from the a-file. **81.f6+ Kf8 82.Re2 Ra6+** Black has achieved a drawn Philidor position.
- 9-17 Black's king is more centrally located, but the rook has limited mobility on the h-file. **47.Kf2! Ke5 47...Bb6+ 48.Rxb6 axb6 49.g3+** forking the king and rook. **48.g3 Rxh3 49.Kg2 Rh5** Trying to save the rook with 49...g4 50.Rxg4 Rh5 51.Bg6 Rg5 52.f4+ Kf6 53.fxg5+ Kxg6 54.gxh6+ Kxh6 leaves White up the exchange with a winning position. **50.Ra6!** clearing g6 for the bishop and gaining a tempo by attacking Black's bishop. **50...Bb6 51.Bg6** Black's rook is trapped.
- 9-18 **40.Rb6!** forking Black's rook and pawn in an attempt to trade rooks. 40.Rxh7 a4 41.Rb7 a3 42.Rb1 Ra4 43.Ra1 gives White a smaller advantage. **40...Ra8 40...Rxb6 41.cxb6 Kd7 42.e5** is winning for White. **41.Rxf6 a4 42.Rf2 a3 43.Ra2 Kd7 44.d5** gives White a significant advantage with three connected passed pawns in the center.
- 9-19 Both players are racing to promote their passed pawn. **36.Rg1!** preventing Black's pawn from promoting. **36...Rxc1 36...Kf8 37.Rxg2** and **36...Rh6 37.Rxg2 Kf8 38.Ra2** are both winning for White. **37.g7** White's pawn can promote. **37...Kd7 38.g8=Q Rf1 38...Rc1 39.Qxg2 Rc5 40.Qb7+ Kd6 41.Qb6+ Rc6 42.Qxc6+ Kxc6 43.Kxf5** with a winning king and pawn endgame. **39.Qxg2 Rxf4 40.Qd2+** forking Black's king and rook.

9-20 Both players are close to promoting pawns. Black's king is in danger on the back rank. White wins with **53.Rh3!** threatening 54.Rh8 mate. **53...gxf6 54.gxf6 Rg7** the only move since 55.Rh8 mate is threatened. 54...Kg8 55.Be6+ Rf7 56.gxf7+ Kf8 57.Rh8 mate. **55.Be6!** 55.fxg7+? Kxg7 56.Rh7+ Kxg6 57.Ra7 b2 is winning for Black. **55...Rg8 56.g7+ Ke8** 56...Rxc7 57.Rh8+ Rg8 58.Rxc7 mate **57.Rxb3** 57.Rh8 Kd8 58.Rxc7+ Kc7 59.Rxb8 a1=Q 60.g8=Q Qb2+ 61.Kh3 Qc3+ 62.Qg3+ is also winning for White. **57...Kd8** 57...Rxb3 58.f7+ Ke7 59.fxg8=Q a1=Q 60.Qf8+ Kxe6 61.g8=Q+ giving White two queens. **58.Rxb8+ Kc7 59.Bxa2 Rxb8 60.f7** giving White a winning position with two connected passed pawns on the 7th rank.

Lesson 10

Basset Hound Solutions



- 10-1 White has an isolated passed pawn on c5. Both kings are in potential danger. Black wins by playing **59...f5+**. **59...Qf5+** **60.Kh4** and Black has no safe checks. **60.gxf6** **60.Kh4 Qh1** mate **60...Qf5+** **61.Kh4 Qh5** mate.
- 10-2 White's king is close enough to checkmate Black's king in this position with a queen against a rook pawn on the 7th rank. **47.Qh1+** **47.Qb8+** is also winning. **47...Kb2** **48.Qg2+** **Kb1** **48...Kb3** **49.Qg7** threatens **50.Qa1** blocking the pawn on the promotion square. **49.Kd3!** **a1=N** **49...a1=Q** **50.Qc2** mate or **49...Ka1** **50.Kc3 Kb1** **51.Qb2** mate. **50.Kc3 Nc2** **51.Qxc2+** **Ka1** **52.Qb2** mate.
- 10-3 Both players have passed pawns on the 7th rank about to promote. **61.Qf8+**! **Kh7** **62.Qf5+** checking Black's king while protecting the c8 promotion square. **62...g6** Retreating the king allows White to promote the pawn with check. **63.Qd7+** **Kg8** **64.c8=Q+** **Qxc8** **65.Qxc8+** and after Black's king moves White can win the pawn on a2. Promoting with check often gains a critical tempo that wins the game.
- 10-4 White's king is surrounded by Black's pieces. Black wins with **60...Qg2+**! **61.Ke3** **61.Ke1 Kd3** threatening both **62...Qg1** mate and **62...Qe2** mate. **61...f4+** **62.Kxf4 Kd3!** Black threatens **63...Qg4** mate. White's queen can't check Black's king. **63.Qg5 Qf2** mate.
- 10-5 White is three pawns ahead in material and looks for the easiest path to victory. Black is trying to create complications by pushing the d-pawn to make winning for White as difficult as possible. The most effective way to win pawns is to capture them with check. **49.Qg7+** **49.Qf6+** **Ke8** **50.Qh8+** is the same idea, forcing Black's king to the 2nd rank so the queen can capture the h7 pawn with check. **49...Ke8** **50.Qg8+** **Kd7** **51.Qxh7+** **Kc6** **52.Qxd3** White ahead by five pawns with a dangerous passed pawn on h6 and a king that is well-protected from checks from Black's queen.
- 10-6 Black's h7 pawn is beneficial for White because the bishop pawn on the 7th rank vs. a queen ending won't end in stalemate since the h-pawn has legal moves. **51.Qg4+** **Kh1** **51...Kh2** **52.Qf3 Kg1** **53.Qg3+** transposes to the game. **52.Qh3+** **Kg1** **53.Qg3+** **Kf1** **53...Kh1** **54.Qxf2** is not stalemate because of the h-pawn. Black has time to move the king closer to the f2 pawn. **54.Kc4 Ke2** **55.Qd3+** **Ke1** **56.Qe3+** **Kf1** **57.Kd3 Kg2** **58.Qe2 Kg1** **59.Qg4+** **Kf1** **60.Ke3 h5** **61.Qg3 Ke1** **62.Qxf2+** **Kd1** **63.Qd2** mate.
- 10-7 White has a couple extra passed pawns on the queenside but an exposed king. White's queen controls the h1-a8 diagonal, defending h1 and g2 near White's king. Black forces mate with **65...g4+** **66.Kh4** **66.Kxg4 Qf5+** **67.Kh4 Qh5** mate **66...Qh2+** **67.Kxg4 Qh5+** **68.Kf4 Qf5** mate.
- 10-8 Due to the pawn on the 7th rank, White has a winning position. White's king finds shelter from Black's queen by moving the king to the kingside. The best continuation is **106.Ke8 Qh2** **107.Kf8** threatening **108.Qg7** mate. **107...Qb8+** **108.Kf7 Qf4+** **109.Kg8 Qb8+** **110.Qf8+** forking Black's king and queen to trade queens and win the game.
- 10-9 White has the further advanced passed pawn. Black is threatening to draw with **36...Qxf2+**. White needs to avoid Black's checks to have time to promote the pawn. **36.Kg1!** the best way to escape checks. **36.Qb5 Qxf2+** gives Black a long series of annoying checks. **36...Qd1+** **37.Kg2** Black has no safe checks. **37...Qb1** **38.Qc7 Qe4+** **39.Kh2 Qd4** Black is again out of safe checks. **40.Qf4** and the pawn can promote.
- 10-10 White would like to promote the a-pawn but has to prevent the threatened threefold repetition draw threat of **49...Qxf2+**. White's best variation is **49.Qe5+** **Kh7** **49...Kg8** **50.a8=Q+** promotes the pawn with check and **49...Kh6** **50.Qh8** mate. **49...f6** **50.Qc7+** **Kh6** **51.Qf4+** **Kh7** **52.a8=Q** is also winning for White. **50.Qf6** protecting the f2 pawn. Black has no safe checks. **50...Qa6** **51.Qxf7+**

Kh6 52.Qf8+ checking the king while protecting the a8 promotion square. **52...Kh7 53.a8=Q**
with a winning position.

Chess Detective Solutions



- 10-11 **52.d6** Black's king is now outside the square of the d6 pawn. White wants to promote the pawn while avoiding checks from Black's queen. **52...h3+ 53.Kf2** keeping Black's queen off of f3 where she would create mate and threefold repetition threats. **53...Qb7 54.d7 Qg2+ 55.Ke3 Qg5+ 56.Kd3** Black is out of safe queen checks. **56...Qd8** Black's queen is forced to the promotion square where she has limited mobility. **57.Qd6+ Kf7 58.Kd4** White's king can either help the d7 pawn promote or move toward the isolated f5 pawn and close in on Black's king.
- 10-12 Black's king is aggressively placed which would be beneficial in a king and pawn ending. An aggressively placed king in queen and pawn endings can be vulnerable to checkmate. White forces mate with **41.Qg3+! Kg5 42.h4+ Kf6** 42...Kh6 transposes to the game position after **43.Qd6+. 43.Qd6+ Kg7 44.f6+ Kg6** 44...Kh6 45.Qf8+ Kg6 46.Qg7 mate **45.Qe5** threatening 46.Qf5+ followed by 47.Qh5 mate.
- 10-13 White's queen wins some of Black's pawns after **33.Rd8+ Rxd8 34.Qxd8+ Qf8 35.gxf7+** White also wins by creating a passed b-pawn after capturing pawns on the queenside with 35.Qxc7 and 36.Qxb6. **35...Kxf7 36.Qf6+** 36.Qxc7+ and 36.Qxf8+ are also winning. **36...Kg8 37.Qxe6+ Kh7 38.Qd7+** 38.Qxg4 also wins since White is a couple pawns ahead. **38...Kh6 39.e6** advancing the passed pawn. **39...Qa8+ 40.Qd5 Qe8 41.Qe5 Qe7** Black's queen has to prevent the passed pawn from promoting. **42.Kg3 Kg6 43.Kxg4** Black is lost due to being two pawns behind, needing to prevent White's e6 pawn from promoting, and having an exposed king.
- 10-14 Black's goal is to advance the bishop pawn to f2 to obtain a draw since White's king is far away. White wants to prevent the pawn's advance. The correct move for Black which keeps the f2 square available for the pawn is **46...Kf1!** Every other king move allows the queen to reach critical squares behind the pawn and force a win. **47.Qa1+** in order to prevent 47...f2. **47...Kg2!** 47...Ke2? 48.Qb2+ Kf1 (or 48...Ke1) 49.Qb1+ Ke2 50.Qe4+ Kf2 51.Kb6 with a winning position for White. **48.Qg7+** the only move that prevents the pawn from advancing. The game is drawn since White can't improve on repeating the position. This is a rare exception where a bishop pawn on the 6th rank can draw against a queen. White would have a winning position if the king were on b8 instead of a7 since the queen could move to a8 to pin the pawn to the king after checking on a1.
- 10-15 Black threatens 41...Qg2 mate. White forces mate with a series of checks by playing **41.Qf5+ g6** 41...Kh6 42.Qxh5 mate or 41...Kg8 42.b8=Q mate. **42.Qf7+ Kh6 43.Qf8+ Kg5** 43...Kh7 44.Qe7+ Kh6 (44...Kg8 45.b8=Q mate) 45.g5 mate **44.Qe7+ Kf4** 44...Kh6 45.g5 mate **45.b8=Q mate** (45.b8=B mate or 45.Qe3 mate).
- 10-16 White has the further advanced passed pawn and aggressively positioned king. White wins by playing **51.Qg2+ Kf8** 51...Kh8 52.Qa8+ Qg8 53.Qa1+ (53.Qxg8+ Kxg8 54.d7 is also winning.) 53...e5 54.Qxe5+ Qg7 55.Qxg7 mate. **52.Qa8+ Qe8 53.Qb7!** threatening 54.Qg7 mate. **53...Qd8** 53...Qf7 54.Qc8+ Qe8 55.d7 is winning for White. **54.Kg6!** threatening 55.Qf7 mate. **54...Qe8+ 55.Kf6! Qd8+ 56.Kxe6 Qe8+ 57.Qe7+ Qxe7+ 58.dxe7+ Ke8 59.Kd6 Kf7 60.Kd7** and the pawn can promote.
- 10-17 White is ahead two pawns and the king is protected from checks. **57.Qg5+** 57.g4 and other moves are also winning, as is often the case when one player has a material advantage. Advancing the passed h-pawn keeps White's king better sheltered. 57.Qxc3? bxc3 and Black's pawn promotes. **57...Kf7** 57...Kh7 58.Qg6+ Kh8 59.h6 e4 60.Qg7+ Qxg7 61.hxg7+ Kxg7 62.Kg2 Kf6 63.f4 gives White an easily winning position. **58.Qg6+ Ke7 59.h6 Qxb3 60.h7 Qd1+ 61.Kg2 Qd5+ 62.f3 Qd2+ 63.Kh3 Qd7+ 64.Qg4 Qd1 65.Qg7+** clearing the g4 square for the king and protecting the promotion square. 65.h8=Q? Qh1+ mate. **65...Kd6 66.h8=Q Qf1+ 67.Kg4 Qc4+ 68.Kg5 Qc1+ 69.f4** and Black has finally run out of safe checks. White is winning with two queens.

10-18 White is a knight to two pawns ahead in material, but has an exposed king. Black's attack succeeds with **43...h5!** threatening 44...g4+. **44.Qxh5** 44.Qb7+ Kh6 45.Qg2 g4+ 46.Kh4 Qxg2 threatening 47... Qh3 mate; 44.Qf1 g4+ 45.Kh4 Qh2+ 46.Qh3 Qxh3 mate; or 44.g4 hxg4+ 45.Qxg4 Qh1+ 46.Kg3 Qe1+ forking the king and knight. **44...Qh1+ 45.Kg4 Qd1+!** skewering the king and queen. **46.Nf3 Qd7 mate.**

10-19 White is a pawn behind, but has an advanced passed pawn on e6. White is also pinning Black's f6 knight to the king. **30.Ba3!** improving the bishop's position and forcing Black's queen to move. 30.h4 followed by 31.h5 gives White a smaller advantage. **30...Qxa3** 30...Qe8 31.Qc7+ Kg8 32.Be7 Kg7 33.Bxf6++ Kxf6 34.Qe5+ Ke7 35.Ne2 with the idea of 36.Nf4. **31.Nxh5+ gxh5** 31...Kh6 32.Nxf6 is winning since Black will not be able to force a perpetual check. **32.Qg5+ Kf8 33.Qxf6+ Kg8 34.e7** 34.Qf7+ also wins. **34...Qc1+ 35.Kf2 Qc2+ 36.Kg3 Qd3+ 37.Kh4 Qe4+ 38.Kxh5 Qe2+ 39.Kh4 Qe4+ 40.g4 Qe1+ 41.Kh5** and Black has run out of safe checks.

10-20 Black has an outside passed pawn, but White has the more active king. This position turns into a queen and pawn ending with long pawn races to calculate. **54.a3!** Falling short by one tempo is 54.Ke5 Kb4 55.Kd5 h5 56.a3+ Kxa3 57.c5 h4 58.Ke4 h3 59.Kf3 h2 60.Kg2 h1=Q+ 61.Kxh1 Kb2 62.c6 a4 63.c7 a3 64.c8=Q a2 and the game is drawn because Black's pawn on the 7th rank is a rook pawn and White's king is too far away. **54...h5** 54...Kxa3 55.c5 Kb2 56.c6 a4 57.c7 a3 58.c8=Q a2 59.Qb7+ Kc2 60.Qe4+ Kb2 61.Qb4+ Kc2 62.Qa3 Kb1 63.Qb3+ Ka1 64.Qc2 h5 65.Qc1 mate. **55.Kg3! h4+ 56.Kh3!** Black's h-pawn must be kept alive so when Black's a-pawn reaches a2 the position isn't drawn. Black is in zugzwang. **56...Kxa3 57.c5 a4 58.c6 Kb2 59.c7 a3 60.c8=Q a2 61.Qb7+** White's queen can zigzag back towards Black's king and a-pawn. **61...Kc1 62.Qc6+ Kb2 63.Qb5+ Kc2 64.Qc4+ Kb2 65.Qb4+ Kc2 66.Qa3 Kb1 67.Qb3+ Ka1** Black would be stalemated, if not for the h-pawn. **68.Kg4! h3 69.Qc2 h2 70.Qc1 mate.** White checkmates Black one move before the h-pawn promotes.

GLOSSARY

absolute pin when a piece is pinned to the king and cannot move because the king would be placed in check

absolute skewer when the king is the first piece in the line of attack from a long-range piece and must get out of check

algebraic notation chess language that describes a move by naming the moving piece and the square it moves to, using a letter-number grid system

asymmetrical pawn structure a pawn structure where the pawns are not symmetrical, when one player has a pawn on a file where the opponent does not (also see half-open file)

attacker a piece that attacks an opposing piece

back rank another name for the first rank, the rank closest to the player behind the pawns where the taller pieces begin the game

back rank mate a checkmate that occurs when the king is attacked on the back rank by a queen or rook and his escape is blocked by his own pawns or pieces

backward pawn a typically weak base pawn on a half-open file that may be easily attacked by the opponent's pieces, especially the rooks

bad bishop a weak bishop usually blocked by its own pawns, limiting its mobility

base pawn the pawn in a pawn chain that is closest to the player and has no pawn to protect it

bishop (symbol – B) a minor piece worth three pawns that moves diagonally in any direction until it runs into another piece or the edge of the board

bishop pair the advantage of having both bishops, typically against a bishop and knight or two knights; worth about half a pawn in open positions

Black player with the dark-colored pieces who moves second in the game

Black move a move by the player playing the Black pieces written in algebraic notation by giving the move number, followed by three periods, and then the move; for example 1...Nf6

breaking a pin eliminating a pin, giving the pinned piece the freedom to move

candidate moves reasonable moves that make sense without calculation; the player's main choices for their move

capture when a piece moves to a square where an opposing piece is resting and removes the opposing piece from the board

castling a special move that usually occurs in the opening where the king moves two squares away from the center with a rook moving one square past him, and the only time a player can move two pieces in one turn

castling long castling queenside

castling short castling kingside

center the middle of the board that includes the squares d4, d5, e4, and e5

centralizing (or activating) the king strategically moving the king toward the center of the board where he can join the battle, typically occurring in the endgame

check when a player's king is under attack and threatened to be captured

checkmate the end of the game which occurs when a king is put in check with no way of escaping

closed pawn structures a position with pawns blocking each other, thereby restricting the movement of the pieces and pawns

combination a series of moves that are played in an exact sequence to gain an advantage

connected passed pawns two or more passed pawns on adjacent files

counterattack an attack mounted by the player who is initially defending

cutting off the king a barrier created by a rook or queen along a file or rank where the opponent's king cannot cross because he would be moving into check

dark-squared bishop a bishop that moves on the dark squares

decoy also called attraction, where you coax an enemy piece into a trap or onto a square which allows you to create a winning combination or position

defender a piece that defends another of its own pieces

deflection a tactic where the defender is chased away from protecting a critical square

developing a piece (also called development) when a piece (knight, bishop, rook, or queen) moves off its starting square to a better square, increasing its power

diagonal a slanting row of squares whose color is the same

diagonal path the path a king can take where he covers the greatest distance by moving one square horizontally and vertically simultaneously

diagonal opposition a variation of the opposition when the kings are one square apart diagonally

direct opposition a position where the kings are separated by one square on the same file or rank

discovered attack moving a piece and attacking an opponent's piece with a bishop, rook, or queen hiding behind the piece that moved

discovered check moving a piece and checking the opponent's king with a bishop, rook, or queen hiding behind the piece that moved

discovery a type of double attack where the moving piece can attack an opponent's piece or critical square, while also uncovering a threat from a long-range piece behind it

distant opposition an extension of the opposition where there are three or more odd numbered squares between the kings

diversion diverting a piece from an important square, similar to deflection

double attack a fork or discovered attack where the moving piece also attacks an opponent's piece

double check a discovered check where the moving piece also checks the king

doubled isolated pawns two pawns lined up vertically on the same file with no pawn on a file next to them that can protect them

doubled pawns two pawns lined up vertically on the same file that have a pawn on a file next to them that can provide protection

draw a chess game ending in a tie where both players receive half a point in a tournament

draw by insufficient mating material the type of draw that occurs when both players lack the material necessary to checkmate the king, or when one player runs out of time but cannot lose because the opponent does not have enough material to deliver checkmate

draw offer when one of the players makes a move and verbally offers a draw to the opponent

endgame the phase of the game when only a few pieces are still on the board

en passant ("in passing" in French) a special pawn capture that exists for only one move and occurs when a pawn on the fifth rank captures an opposing pawn on an adjacent file that advanced two squares forward, as if it only moved one square forward

en prise ("in take" in French) refers to a piece or pawn that can be captured

exchange an equal trade of pieces in terms of material

exchange sacrifice to voluntarily trade a rook for a bishop or a knight, also known as giving up the exchange

family fork when a king, queen, and another piece are forked

fianchetto an Italian word meaning to develop a bishop to the square directly in front of where a knight starts the game (b2, b7, g2, or g7) where the bishop is on the longest possible diagonal on the board and can attack both of the center squares of its color

50-move draw a rare type of draw where 50 moves have occurred where no pieces have been captured and no pawns have moved

files vertical columns of eight squares on the chessboard identified by a letter from a to h

forcing moves a series of moves (often checks) that force a response from the opponent (like getting out of check or defending a critical threat), keeping him from carrying out his plan

fork a common tactic that occurs when a piece or pawn attacks two or more pieces at once

fortress a defensive position that the opponent cannot penetrate in order to make progress in an attempt to win

free stuff another way to say hanging pieces

gaining a tempo gaining a move by creating a threat

grabbing pawns a risky way to win pawns, since it takes time and gives the opponent a chance to make gains in piece activity

half-open file a file where one player has a pawn and the other player doesn't have a pawn

hanging a piece or pawn left unguarded and exposed to capture

hole a weak square that cannot be attacked by a pawn, ideal for an opponent to occupy with a piece

“I adjust” what a player says when he wishes to center a piece on its proper square and not be forced to move it because of the “touch move” rule

illegal move moving a piece improperly or leaving the king in check after making a move

initiative having the attack and being able to dictate the direction of the game

insufficient mating material when a player does not have enough material left on the board to force checkmate

isolated passed pawn a pawn that has the weakness of being isolated but the strength of being passed

isolated pawn a weak pawn that doesn't have pawn on a file next to it that can provide protection

interpose to block or put in between

king (symbol – K) the most valuable chess piece that cannot be captured and moves one square at a time in any direction as long as that square is not attacked by an enemy piece

kingside the half of the board where the kings begin the game (the e-, f-, g-, and h-files)

kingside majority having more pawns on the kingside than the opponent

knight (symbol – N) a minor piece worth three pawns and the only piece that can jump over other pieces, moving in the shape of a capital “L”

“knight on the rim is dim” a chess rhyme describing the location of a knight poorly placed on the edge of the board

last-rank defense a defense in rook and pawn vs. rook endgames where the weak side's rook moves back and forth on the back rank to achieve a draw

light-squared bishop a bishop that moves on the light squares

long-range pieces bishops, rooks, and queens

losing a tempo losing a move

Lucena position a maneuver in a rook and pawn vs. rook ending where the strong side's king escapes from the promotion square in front of a pawn on the 7th rank that is trying to promote

luft A German word meaning “air”, or room to breathe; moving a pawn up one square to create an escape square for a castled king to move in order to avoid a back rank mate

major pieces rooks and queens

material the sum of the values of the pieces

mating material having enough material to force checkmate

mating net the process where a king is trapped and checkmated, like caught in a net

middlegame the middle phase of the game after the pieces have been developed, usually beginning around move ten and lasting until only a few pieces remain on the board

minor pieces knights and bishops

minority attack an attack by several pawns against a larger group of pawns with the idea of weakening the larger group of pawns and opening up lines of attack

mobile pawns pawns that are not blocked and can move up the board quickly and easily

mobility see piece activity

open file a file not blocked by any pawns

open pawn structures a position with no pawns blocking the free movement of the pieces

opening the opening phase, or first ten or so moves of the game, when most of the pieces are developed and the kings typically castle

opposite-colored bishops situation when each player has one bishop remaining on the board, with each bishop traveling on different colored squares where they cannot attack each other

opposite side castling when one player castles on the kingside and the other player castles on the queenside

opposition the situation that occurs when the kings face each other on a file or rank with a square between them where the player who is on the move is often in *zugzwang* because when they move the king, the opponent's king may have access to important squares

outflanking when the attacking king moves toward and then around a pawn mass he is trying to attack

outpost a strong square, usually in the opponent's territory, where a piece (usually a knight) is safe, protected by a pawn, and cannot be attacked by an enemy pawn

outside passed pawn the passed pawn furthest away from the other pawn clusters where the main battle will take place

overloading when a defensive piece is given an additional defensive responsibility which it cannot complete without abandoning its original defensive assignment

overprotection a preventative measure where multiple pieces defend the same point

overworked piece a piece that has to protect two pieces (or squares) at the same time that often can be taken advantage of tactically

partial pin when a queen or rook is pinned along the same file or rank or a queen or bishop is pinned along the same diagonal

passed pawn a pawn that can move all the way up the board to its promotion square without being blocked or captured by an enemy pawn

passer see passed pawn

passive holding back; not aggressive

pawn (symbol – left blank) the least valuable piece that can only move in a forward direction, captures diagonally, and can promote to another piece, usually the queen, when it reaches the other side of the board

pawn arrow a line from the player's side of the board toward the opponent's side of the board made by a pawn chain that is locked up on two or more files; pawn arrows point in the direction where the player has more space and generally wants to attack

pawn chain pawns on files next to each other that are connected in a diagonal line, so they protect each other

pawn majority having more pawns than the opponent on a particular part of the board

pawn storm a tactic in which several pawns on adjacent files are moved in rapid succession toward the opponent's defenses

perpetual check the most common type of threefold repetition, when the player who is usually losing the game forces a position where he can check the other king back and forth forever

Philidor position a drawing technique where the defender with a rook can draw against a rook and pawn

piece activity having pieces on good squares where they can move freely and have multiple options

pieces knights, bishops, rooks, queens, or kings (pawns are referred to as pawns)

pin when a long-range piece (queen, rook, or bishop) attacks an opponent's piece that is shielding another piece of greater value

process of elimination a decision-making process where, to find the best move, you eliminate legal moves that you determine are clearly not the best move; see also candidate moves

promotion or **promoting a pawn** when a pawn moves all the way across the board to the eighth rank and turns into another piece, usually a queen

promotion square a square on the 8th rank where a pawn promotes

protected when a piece is defended by another piece, usually making it a bad idea for the opponent to capture it

protected passed pawn a passed pawn that is protected by a neighboring pawn

pushing a pawn moving a pawn forward

queen (symbol – Q) a major piece worth nine pawns and most powerful piece on the board that moves in any direction in a straight line horizontally, vertically, or diagonally, until it runs into another piece or the edge of the board

queening a pawn promoting a pawn to a queen

queenside the half of the board where the queens begin the game (the a-, b-, c-, and d-files)

queenside majority having more pawns on the queenside than the opponent

raking bishops a potent attacking force when bishops are placed on adjacent diagonals in an open position

ranks the chess term for rows of eight squares that run horizontally across a chess board

relative pin when the piece shielded by the pinned piece is any piece other than the king

relative skewer when a piece other than the king is first in the line of attack by a long-range piece

removing the guard eliminating or forcing a piece to move that is protecting one or more pieces or squares

resign a gracious way to lose a chess game, typically signified by tipping over one's king, in a hopeless position

roller mate a type of checkmate where typically a rook and queen (or two rooks or two queens) take turns moving one square past each other in order to shrink the box around the opposing king, eventually leading to checkmate typically along a rank or file on the edge of the board

rook (symbol – R) a major piece worth five pawns that moves horizontally or vertically until it runs into another piece or the edge of the board

rook lift moving a rook forward, usually to the third rank, and then in front of pawns on the second rank, where it can then attack on a file into the opponent's territory

rook pawn a pawn on the a-file or h-file, the files where the rooks begin the game

royal fork a fork of the king and queen

sacrifice giving up material in order to gain some other type of advantage or checkmate

score sheet a special piece of paper with spaces for usually 60 moves for each player to record a chess game

separated passed pawns passed pawns separated by at least one file

skewer a type of tactic that is the reverse of a pin, where the more valuable piece is in front of the less valuable piece

smothered mate when a knight checkmates the king where the king is unable to move because he is surrounded by his own pieces, usually in the corner of the board (sometimes referred to as Philidor's mate) because the king's escape choices are most limited there

space an element of chess, related to piece activity, referring to the number of squares controlled by each of the players

square of the pawn an imaginary square the defending king must get into in order to win the race to the promotion square to prevent the opponent's pawn from promoting

stalemate a type of draw where the player to move has no legal moves and is not in check

strong side the player who is ahead in material or has the superior position

symmetrical pawn structure a pawn structure where on each file one player has a pawn, the other player has a pawn opposing it

tactics immediate threats and attacks that make up the battles between pieces

target a weakness in the position the attacker can attack; sometimes a piece, sometimes a square

tempi two or more moves, relating to time

tempo a single move, relating to time

threat an aggressive move that attacks an opposing piece

triangulation a king maneuver used to waste or lose a move, with the goal of forcing the opponent into zugzwang

“touch move” rule tournament rule that states if a player touches one of his pieces, he must move it, if he can legally

“touch take” rule tournament rule that states if a player touches an opponent's piece, he must capture it, if he can legally

trade pieces to exchange pieces of equal value

transposing moves changing the move order to reach the same future position

threefold repetition draw a draw that happens when the same position on the board occurs three different times

tripled isolated pawns three pawns lined up vertically on the same file with no pawn on a file next to them to provide protection

tripled pawns three pawns lined up vertically on the same file with a pawn on a file next to them that can provide protection

uncastled king a king that has not castled and is usually in the middle of the board

underpromotion promoting a pawn to a rook, bishop, or knight instead of a queen for strategic reasons such as avoiding a stalemate

variation a logical alternate sequence of moves different from the main line

weak side the player who is behind in material or has the inferior position

weakness a pawn or square that can be easily attacked by the opponent and is difficult to defend

White player with the light-colored pieces who moves first in the game

White move a move by the player playing the White pieces written in algebraic notation by giving the move number, followed by a period, and then the move; for example, 15.Nf3

winning the exchange gaining a rook for a knight or bishop

zugzwang a German word meaning “compulsion to move”, usually occurring in the endgame when there are fewer available moves; a player is “in zugzwang” when it is their move and every possible move makes the

position worse, but they are obligated to move and cannot pass the turn

zwischenzug a German word for an intermediate or in-between chess move; a tactic in a combination that occurs when an unexpected or surprising move that the opponent must respond to is suddenly played during a sequence of predictable or forcing moves or captures

7th rank the rank where the opponent's pawns begin the game

8th rank the rank furthest away from the player, where their own pawns would promote; also where the opponent's pieces begin the game

Great players quoted in the book

José Raúl Capablanca (1888-1942) 3rd World Champion (Cuba) – 1921-1927

Irving Chernev (1900-1981) Russian-American chess master and noted author

Mark Dvoretsky (1947-2016) Russian International Master, trainer, and writer

Bobby Fischer (1943-2008) 11th World Champion (USA) – 1972-1975

Paul Keres (1916-1975) Estonian Grandmaster and World Champion contender

Alexander Kotov (1913-1981) Russian Grandmaster and author

Emanuel Lasker (1868-1941) 2nd World Champion (Germany) – 1894-1921

Paul Morphy (1837-1884) Unofficially the first World Champion from New Orleans

Aaron Nimzowitsch (1886-1935) Russian Grandmaster and author

André Philidor (1726-1795) French music composer, chess player, and author

C. J. S. Purdy (1906-1979) Australian International Master and writer

Nigel Short (1965-present) English Grandmaster and World Champion contender

Rudolf Spielmann (1883-1942) Austrian World Champion contender and author

ABOUT THE AUTHOR

At age six, Todd learned how to play chess from his father, Alan Bardwick, an expert strength tournament player. Alan utilized many of the chess teaching ideas presented in Chess Detective workbook series.

Back in the 1970's, when few children played in rated chess tournaments, Todd consistently improved his game and was nationally ranked in his age group.

After leading his high school chess team to several state titles, Todd went to college and graduated first in his class from the University of Colorado at Boulder in 1985 with a B.S. in Civil Engineering. After college, he moved to San Diego for five years where he worked as a rocket scientist (structural analyst).

Moving back to Denver in late 1989, he worked as an entrepreneur and continued playing chess. In 1993, Todd achieved the National Master title awarded by the United States Chess Federation.

Of Todd's numerous tournament achievements, most notable is winning the Denver Open Championship five consecutive years (1992-1996) against strong competition, where his performance rating was over 2400.

Beginning in 1993 until the newspaper's closing in 2009, he wrote a popular monthly chess column in the Rocky Mountain News, one of the nation's largest newspapers.

In 1995, Todd founded the annual Rocky Mountain Chess camp which is one of the oldest chess camps in the country. Students come from across the nation to participate in the camp.

In 2002, "The Chess Detective" column was born in *School Mates* magazine. From 2003 to 2017, "The Chess Detective" was featured in *Chess Life for Kids*, the national children's chess magazine published by the United States Chess Federation.

For over a quarter of a century, Todd has been one of the country's leading full-time chess-teaching masters. He has taught well over 15,000 chess classes and is a Professional Chess Coach (Level V), the highest level recognized by the United States Chess Federation. Having a STEM background, Todd's logical and fun approach to the game and reputation as an excellent teacher inspired him to found the Chess Academy of Denver where he teaches well over 750 students per year through private lessons, school classes, chess camps, and year-round camp workshops for adults and children.

Educationally, Todd runs school district chess programs, teaches in Gifted and Talented programs, and trains parents and teachers how to effectively teach chess to children in their school enrichment programs to improve a child's math skills using chess as a vehicle. Todd also regularly trains elementary school teachers who want to learn how to incorporate chess and its educational benefits into their classrooms.

Todd's students have achieved accolades in life and chess. Successes include gaining early admission to top universities, like Stanford and Yale, becoming Presidential Scholars, being ranked number one in chess in the United States for their age group and winning numerous state and national chess titles.

In 2004, Todd completed his first book, *Teaching Chess in the 21st Century – Strategies and Connections to a Standards-Based World*, a comprehensive guide to teaching chess as part of the elementary school math curriculum.

The success of *Teaching Chess in the 21st Century* prompted Todd to write the companion book, *Chess Workbook for Children – The Chess Detective's Introduction to the Royal Game* in 2006 which is currently translated into three other languages and is sold throughout the world.

Published in 2010, *Chess Strategy Workbook – A Blueprint for Developing the Best Plan* is an intermediate book that teaches how to think logically during the game and develop the correct plan.

In 2019, Todd published *Chess Tactics and Combinations Workbook – Winning the Battles Between the Pieces* and *Attacking the Chess King Workbook – Patterns and Strategies for Successful Attacks*. Along with *Chess Strategy Workbook*, these books form a series for the intermediate level and rated chess player.

In 2019, Todd also published *Chess Concepts and Coloring Book for Kids*, a coloring and beginner book for younger kids.

In 2020, Todd published *Chess Handbook – Rules, Tactics, and Strategies for the Improving Player*, a comprehensive chess book for beginner and intermediate players.

Published in 2021, *Chess Endgame Workbook – Acquiring Skills to Win Close Games* expands the series for the intermediate level and rated chess player.

Todd is available for speaking engagements, chess teacher training, chess lessons, chess classes, and simultaneous chess exhibitions. Todd can be reached through his website at www.ColoradoMasterChess.com.



Chess Detective Press

