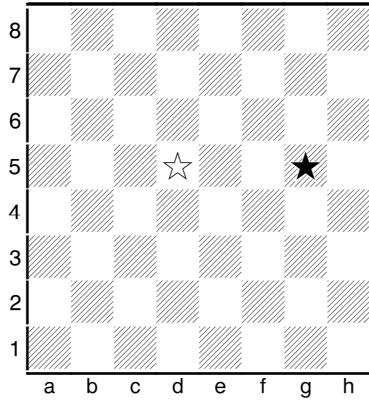
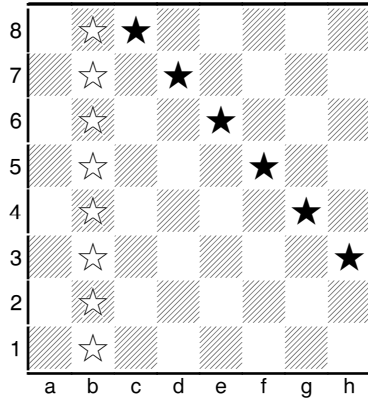


THE BOARD: EXERCISES

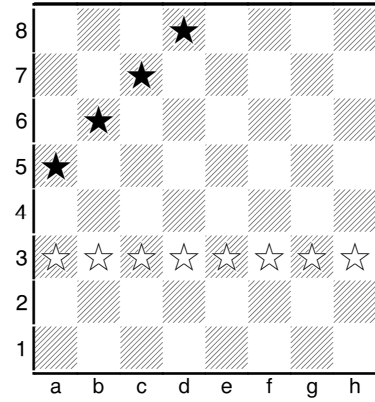
Name the square or line marked by the stars



#1



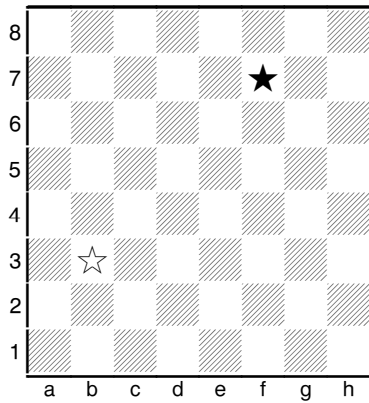
#2



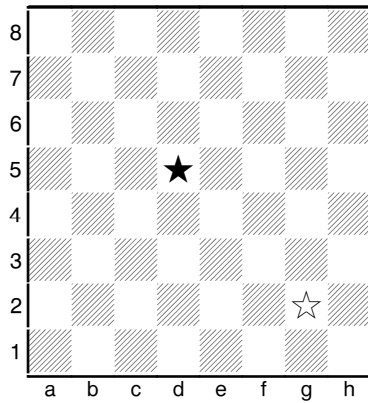
#3

For each star, list the following:

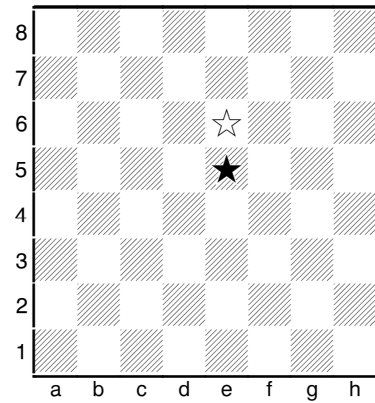
- The square
- The lines it is on (file, rank, diagonals)
- The regions and space it is in



#4



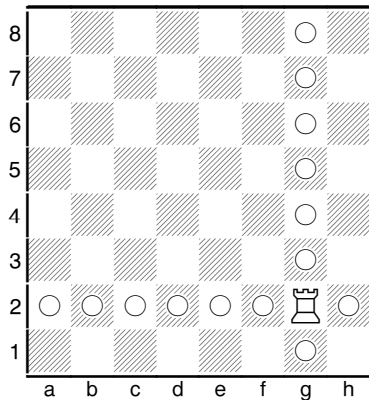
#5



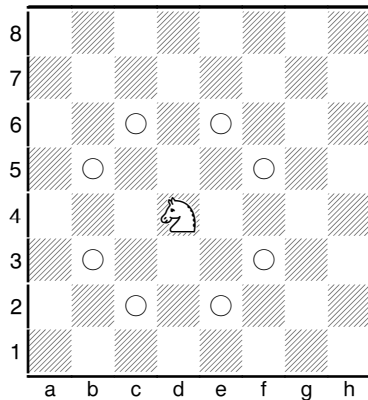
#6

For each piece, list the following: (the circles mark where the piece can move)

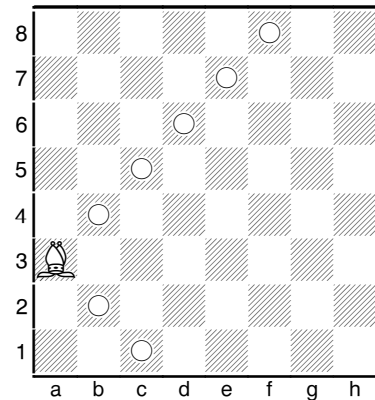
- The square it is on
- The lines it is on (file, rank, diagonals)
- The regions it is in
- The space it holds



#7



#8

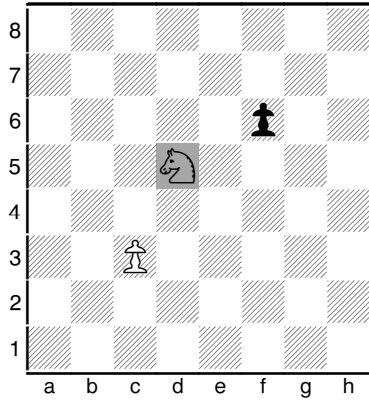


#9

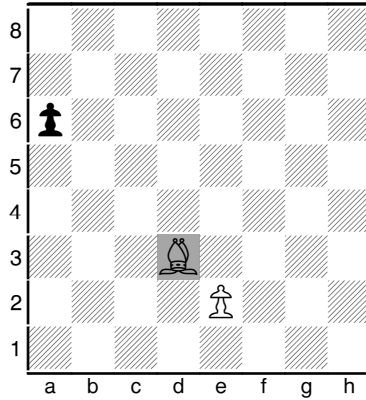
For further practice, try repeating the above exercises with other squares, lines, and pieces.

THE PIECES: EXERCISES

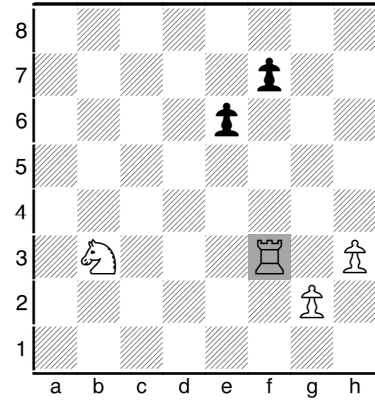
For the selected piece, name all of its possible moves and possible captures.



#1

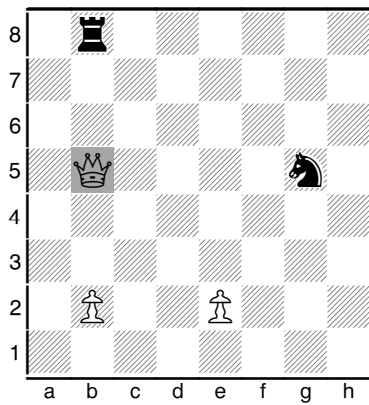


#2

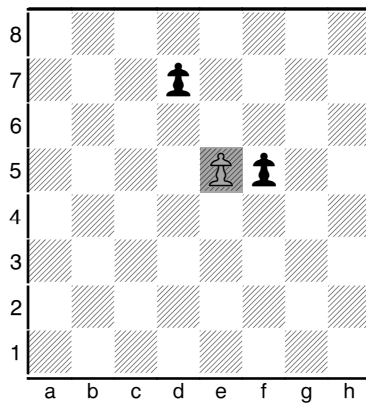


#3

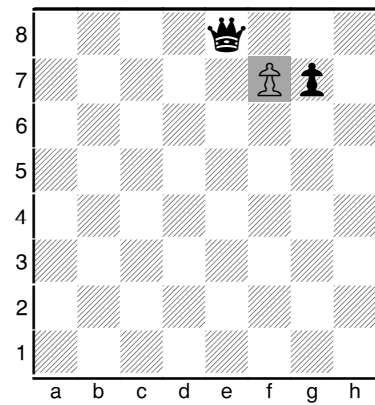
For the selected piece, name all of its possible moves and possible captures.



#4

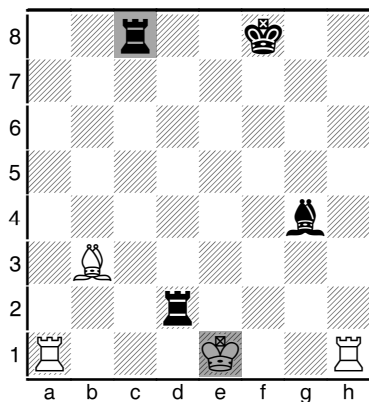


#5

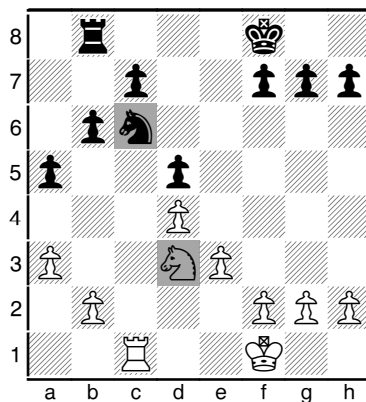


#6

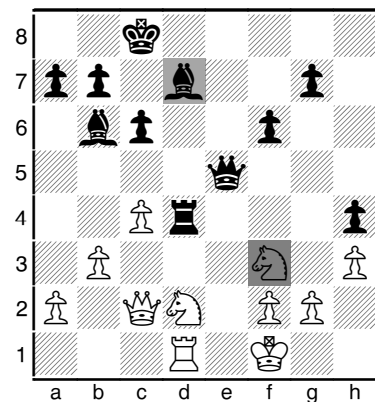
For each selected piece, name all of its possible moves and possible captures.



#7



#8

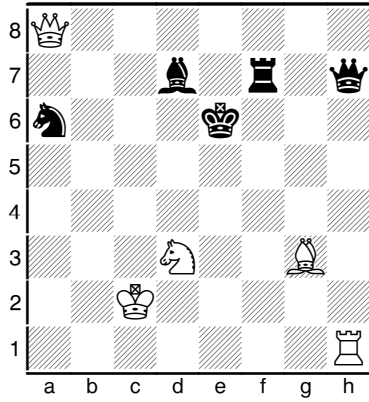


#9

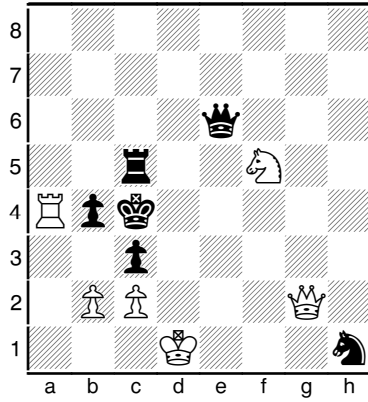
For further practice, repeat the above exercises by placing pieces randomly on the board and then listing all possible moves and possible captures. To challenge yourself, see if you can find the best move possible for the exercises above and your own random positions.

ENDGAME: EXERCISES

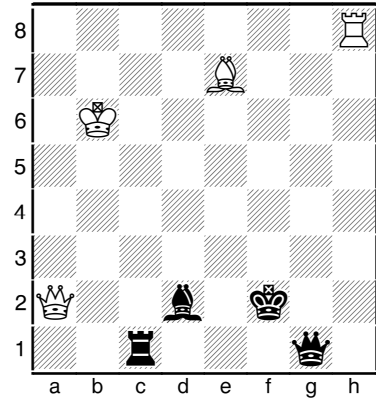
List every move that can deliver check to the Black King and the White King.



#1

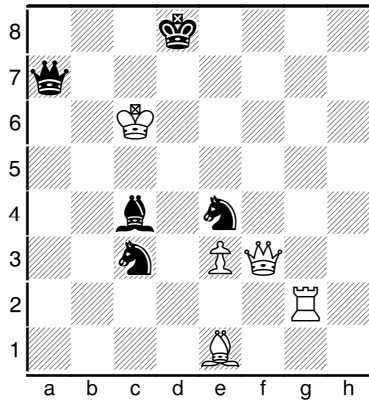


#2

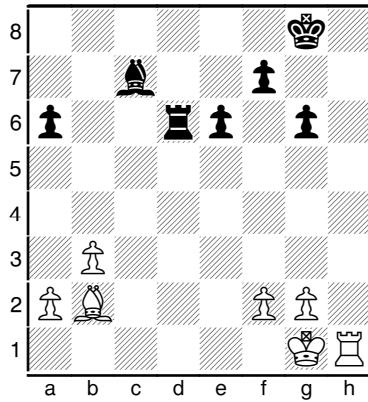


#3

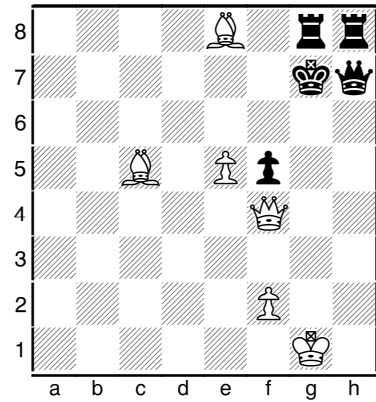
List the moves that are checkmate: 1 if White moves and 1 if Black moves. Remember, you should consider all possible moves.



#4

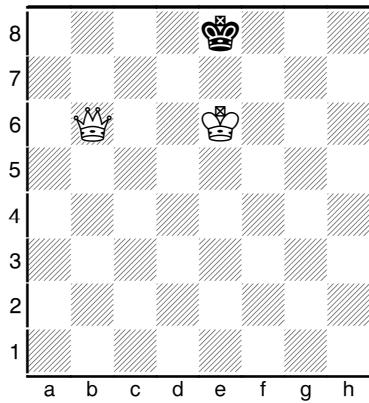


#5

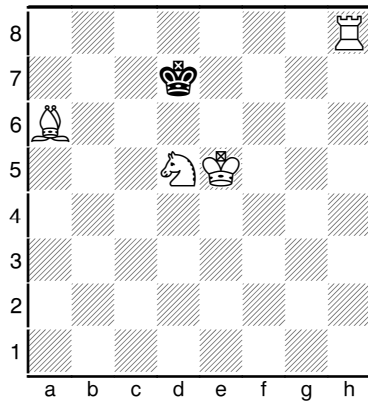


#6

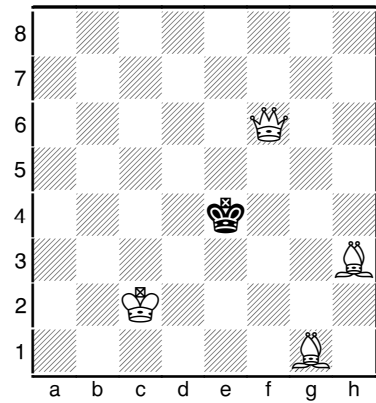
List the move for White that leads to stalemate and the move that leads to checkmate



#7



#8

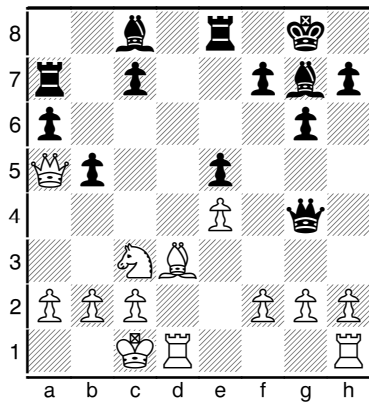


#9

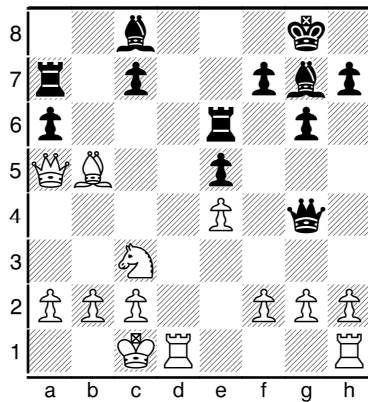
For further practice, set up random positions on the board and find every possible check. Also, try checkmating a Black King (while avoiding stalemate) with the following various combinations of White pieces: King-Queen-Rook, King-Rook-Rook, King-Bishop-Rook, King-Knight-Rook, King-Bishop-Bishop, King-Bishop-Knight, King-Queen, King-Rook.

CHESS NOTATION: EXERCISES

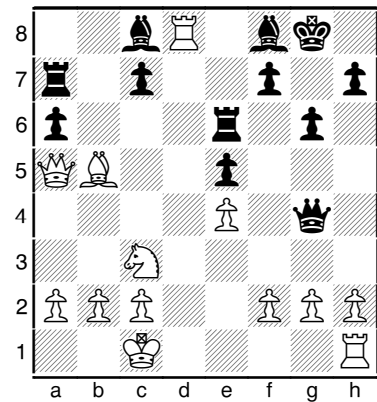
Write down the notation for the following sequence of moves (the first position is the starting position and each following board shows 1 full move on each board):



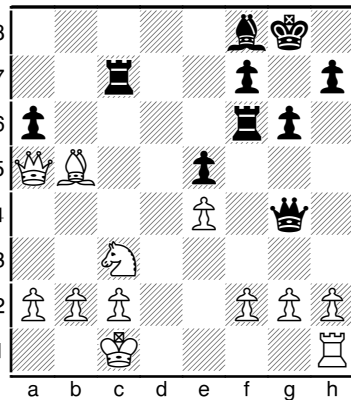
#1



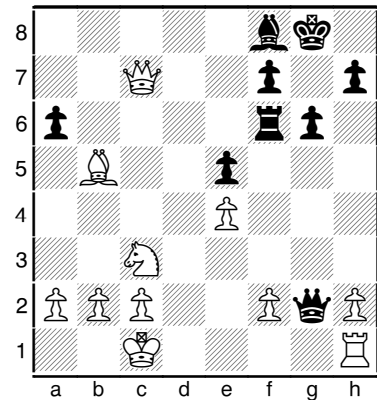
#2



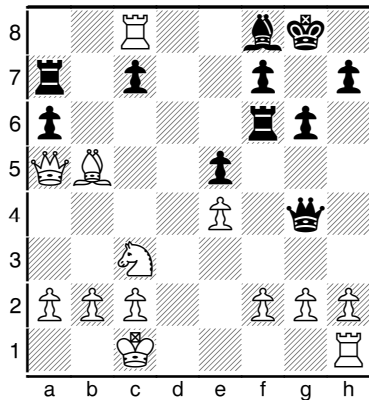
#3



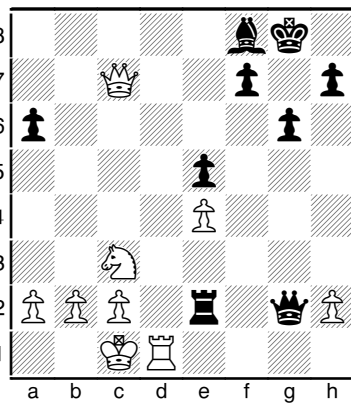
#4



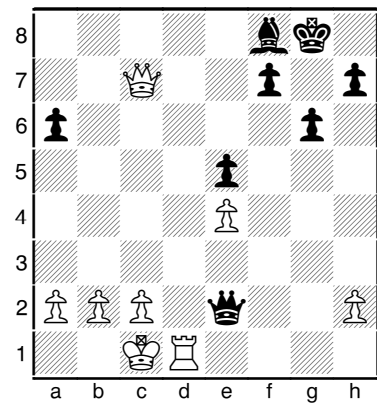
#5



#6



#7

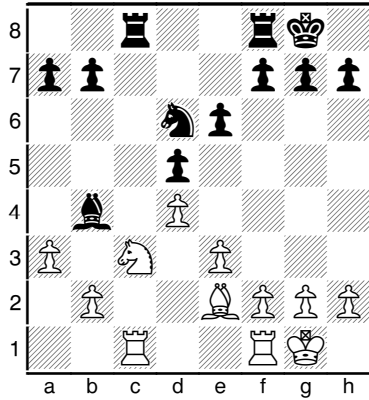


#8

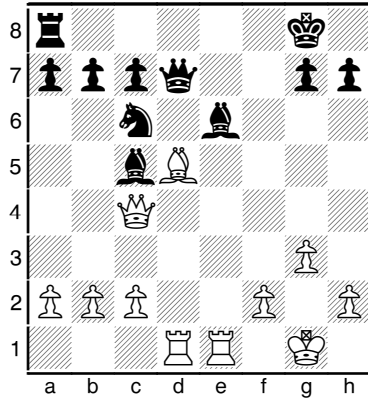
For further practice, play a game while notating each move. Upon completion, replay the game using your notation. Also, find notation for games (often available online by searching for "PGN Famous Chess Games" in a search engine). Play through the games using only their notation as a guide. (PGN means "Player/Game/Notation")

FUNDAMENTAL ELEMENTS OF CHESS: EXERCISES

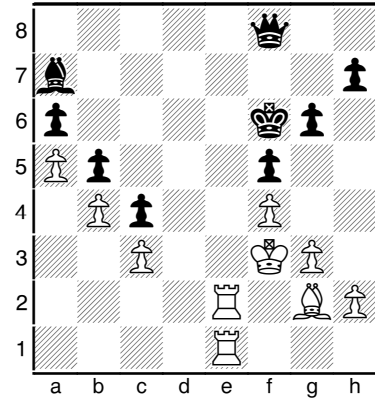
List the material for each side.



#1

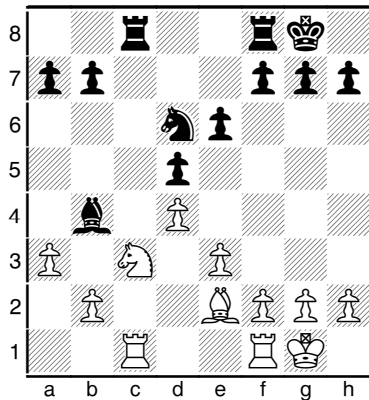


#2

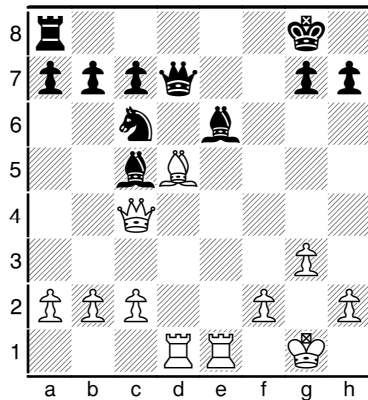


#3

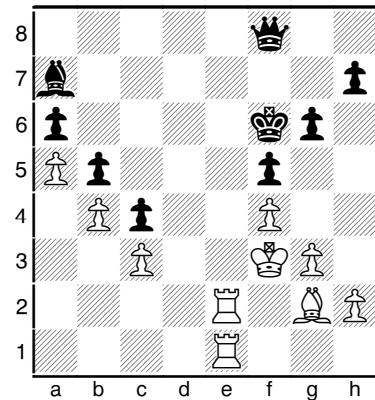
Describe everything you can about the position for each side.



#4

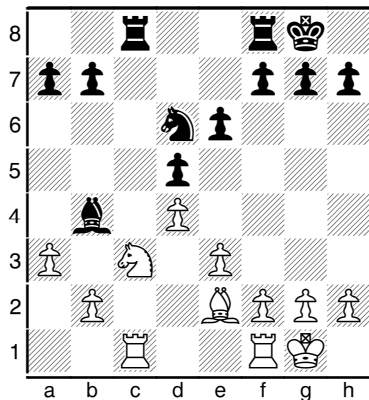


#5

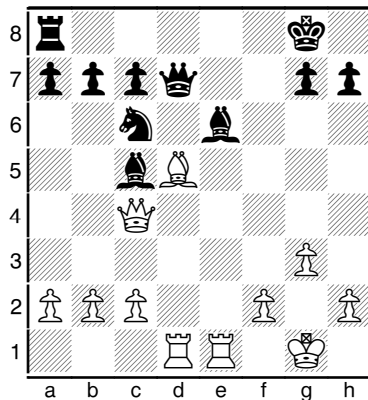


#6

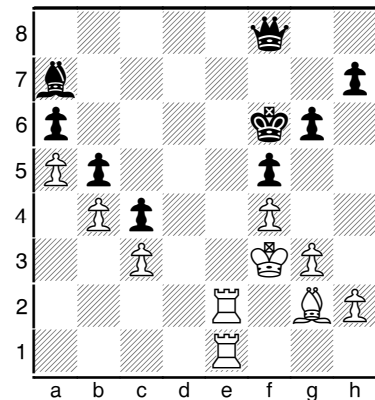
List all the moves with tempo for White and for Black.



#7



#8

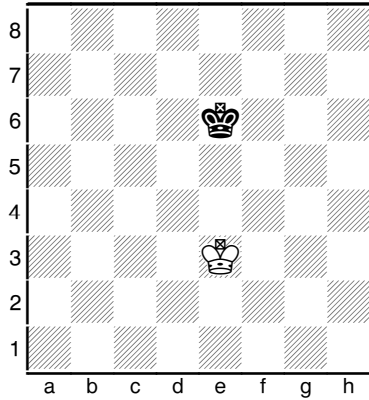


#9

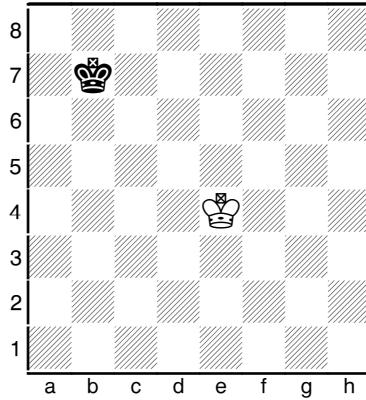
For further practice find famous games online, play through the openings looking at how the players force tempo to gain position and/or material. As you play through the middlegame, stop at various points and analyze the position as best you can. Also, practice checkmating a Black King (while avoiding stalemate) with the following various combinations of White pieces: King-Queen-Rook, King-Rook-Rook, King-Bishop-Rook, King-Knight-Rook, King-Bishop-Bishop, King-Bishop-Knight, King-Queen, King-Rook. At this point, you should strive to make these types of checkmates an automatic process.

OPPOSITION: EXERCISES

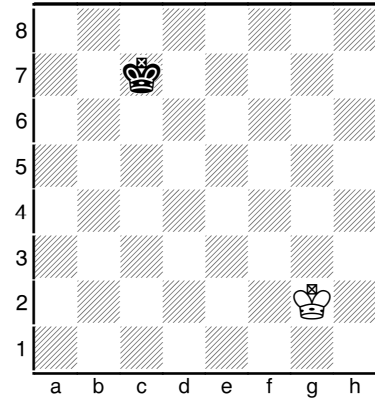
Find the move for White and for Black that would take the opposition.



#1

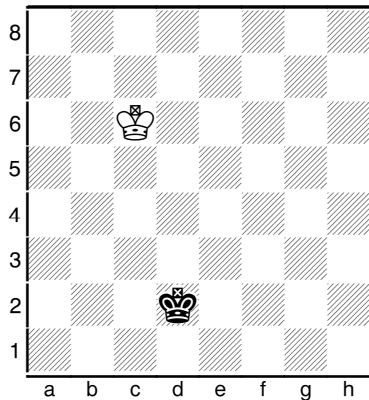


#2

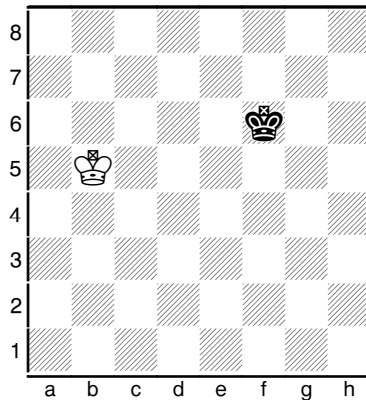


#3

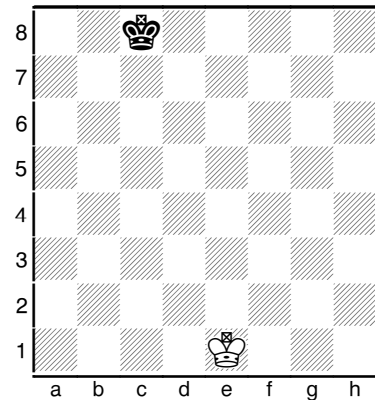
Find the move for White and for Black that would take the opposition.



#4

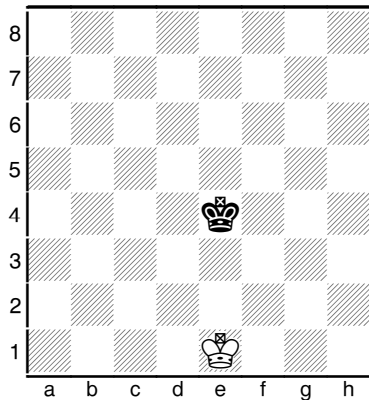


#5

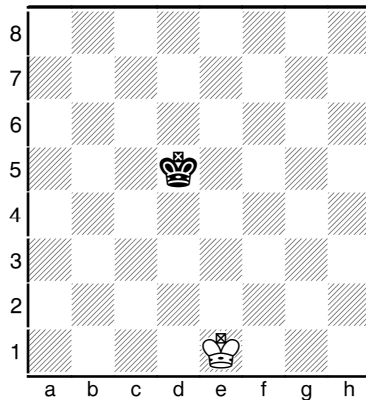


#6

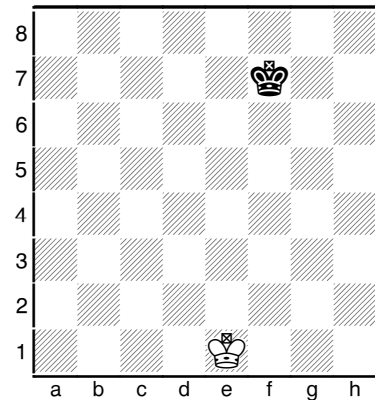
Find the moves that allow White to reach the target squares (White to move).



#7 - d8 or f8



#8 - c8 or e8

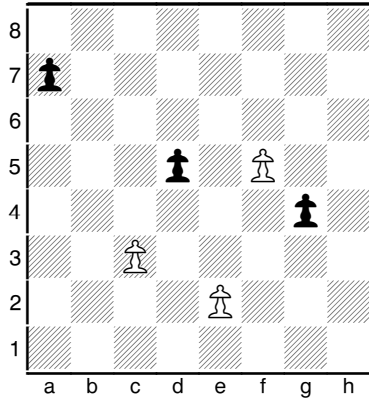


#9 - d8 or f8

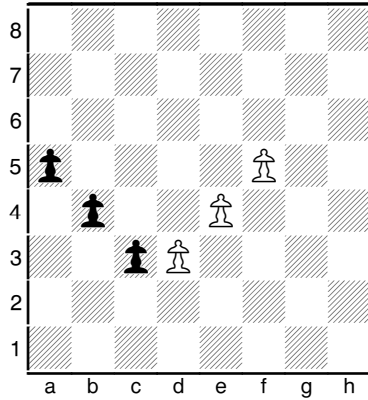
For further practice, place the White King on a1 and the Black King on a8, play a game of opposition where the White King forces his way to either f8 or h8 and Black tries to stop it. You can play the same game by placing the two Kings randomly on the board and setting target squares for each King to reach or block (always target two squares at the edge of the board, 1 square apart).

CRITICAL SQUARES AND THE SQUARE OF THE PAWN: EXERCISES

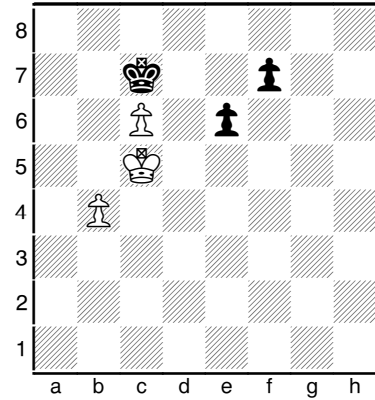
Name the critical squares of each Pawn



#1

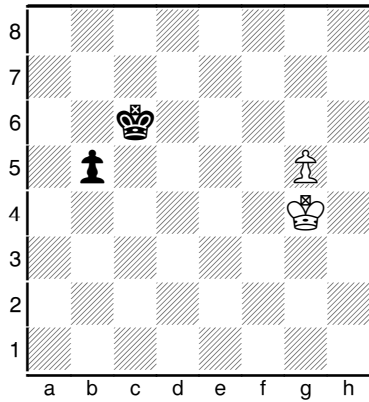


#2

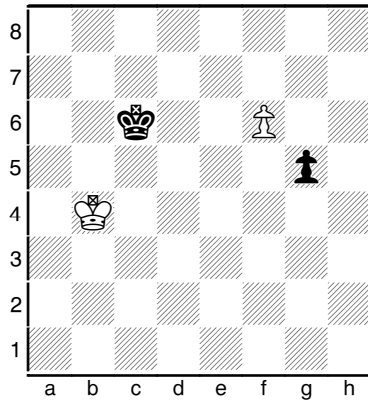


#3

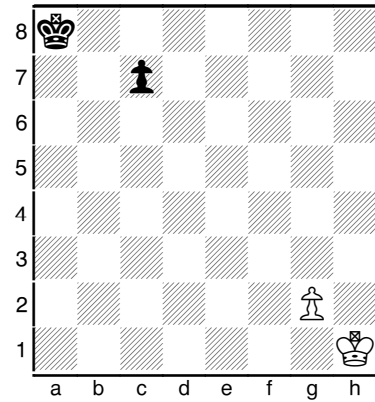
Can the White Pawn promote safely if White is to move? If Black is to move? How?
 Can the Black Pawn promote safely if White is to move? If Black is to move? How?



#4

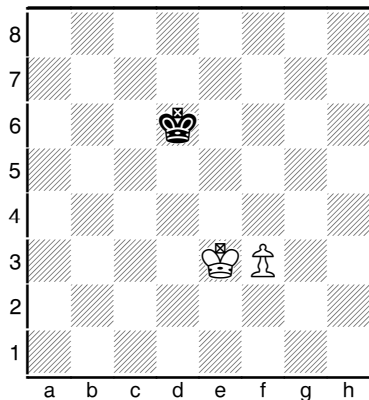


#5

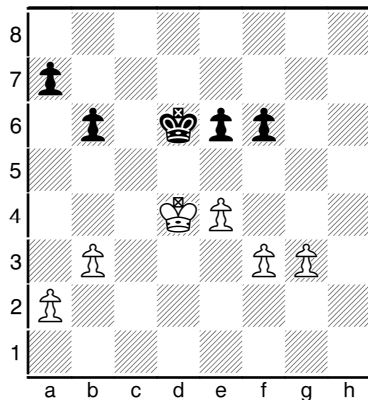


#6

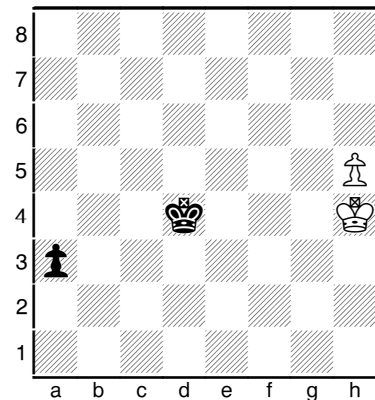
Which side is better if White is to move? How would you proceed?
 Which side is better if Black is to move? How would you proceed?



#7



#8

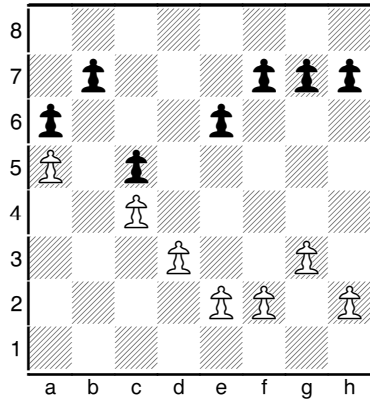


#9

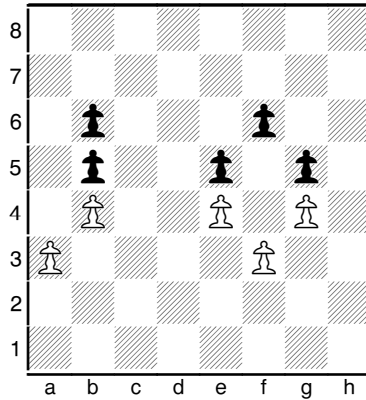
For further practice, practice King v. King-Pawn endgames from various positions, then add a Pawn to one side (King-Pawn v. King-Pawn) and try again. Continue adding a Pawn to each side until you reach a King-8 Pawns v. King-8 Pawns endgame. Be sure to try each combination several times with several different starting positions. This will tremendously enhance your understanding of using the King, Pawns, and space to force a win or draw.

PAWN STRUCTURE: EXERCISES

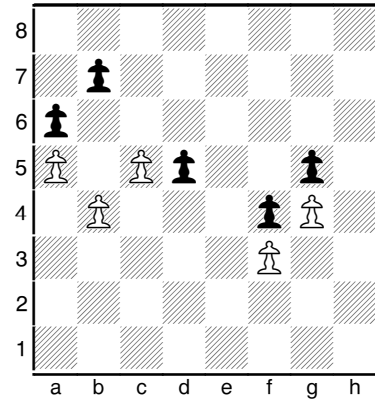
List all the features of the Pawn structure.



#1

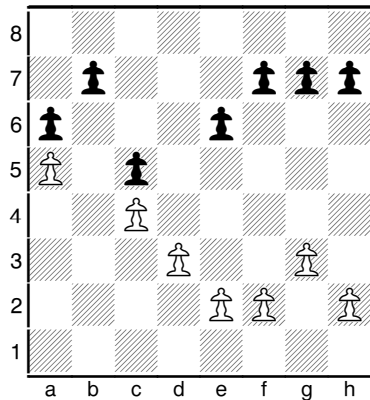


#2

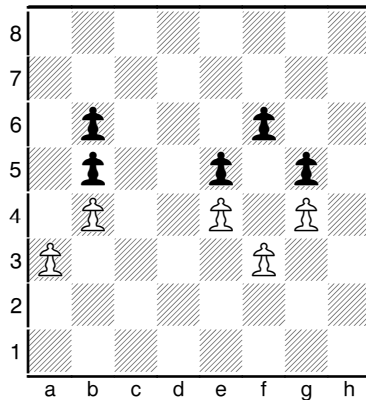


#3

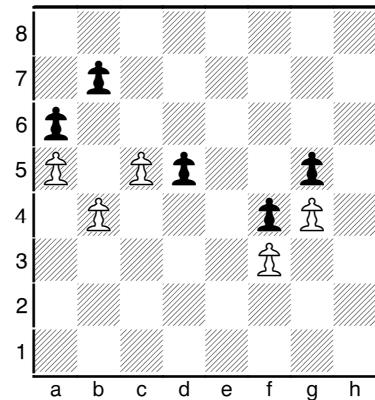
Describe how each Pawn structure affects the lines (files, ranks, diagonals), regions (Kingside, Queenside, Black and White territory), and space of the board.



#4

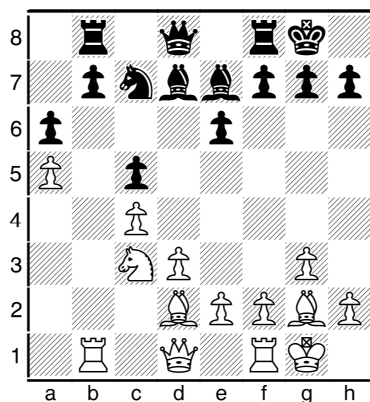


#5

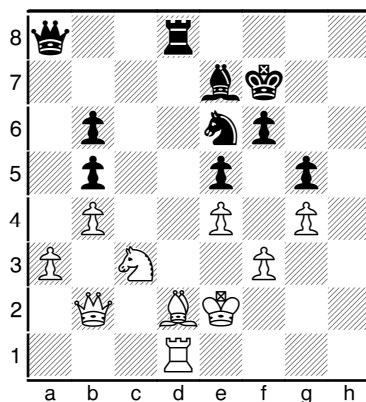


#6

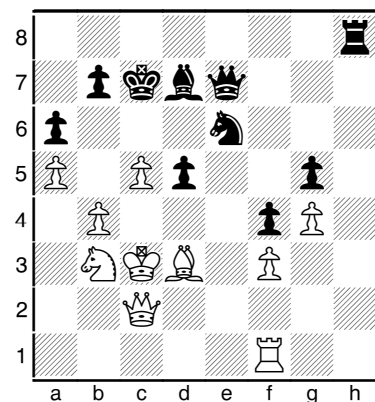
Describe the strengths and weaknesses of each piece (Knight, Bishop, Rook, and Queen) as it relates to the space available based on the Pawn structure.



#7



#8

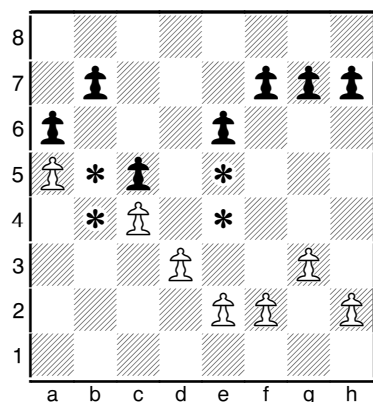


#9

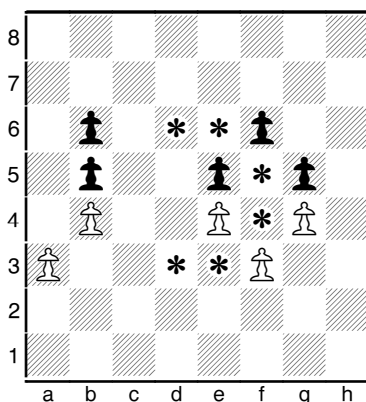
For further practice, with the Kings on their starting squares, have White set two Pawns anywhere in his territory, then have Black set three Pawns in his territory, then have White place two more Pawns in his territory and have Black place one more. Play the game with both players playing for a win or at least a draw. Try altering the number of Pawns as you practice this exercise; give one player a one Pawn advantage, etc. The key is placing the Pawns initially, always alternate players placing Pawns because this will force them to think about the structures they are creating to combat their opponent's structures.

WEAK SQUARES, HOLES, AND OUTPOSTS: EXERCISES

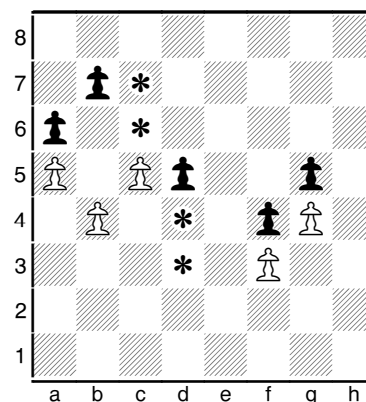
List the number of White and Black Pawns that currently hold or can potentially hold each of the marked squares.



#1

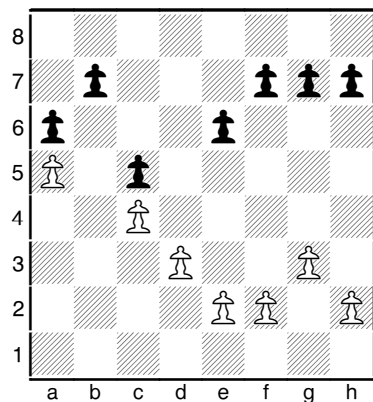


#2

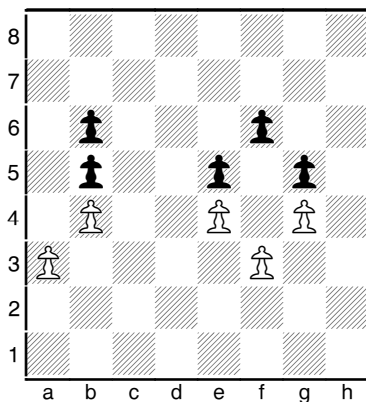


#3

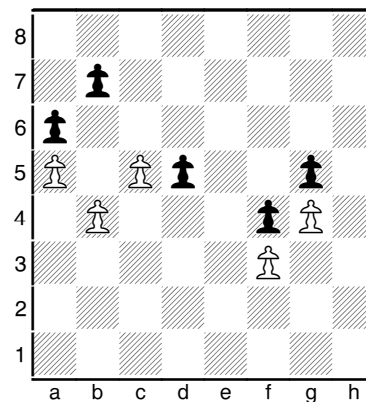
List all of the weak squares, holes, and outposts for each side's territory.



#4

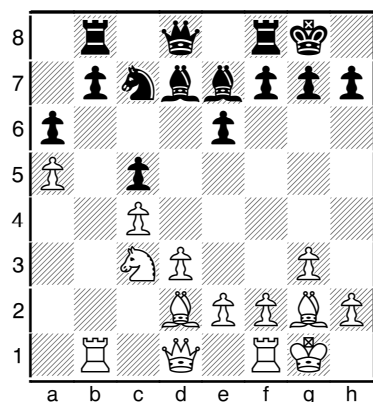


#5

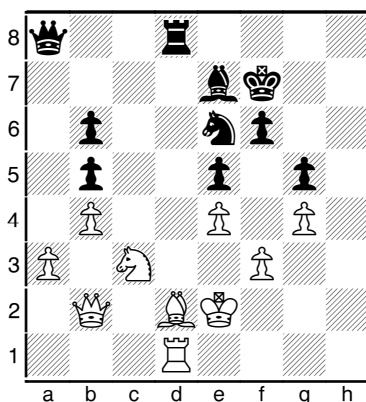


#6

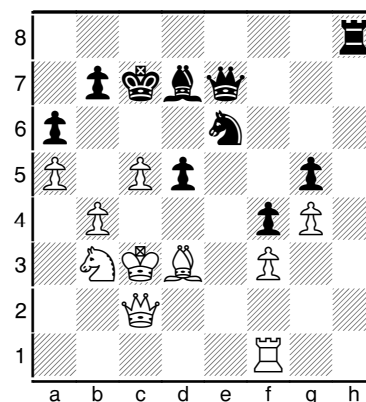
List a strong square for each player's minor pieces and describe a safe path for that piece to reach that square (a path that doesn't put the piece in threat).



#7



#8

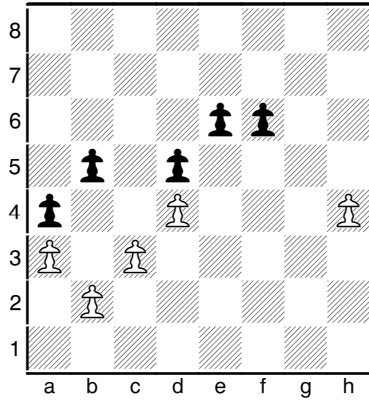


#9

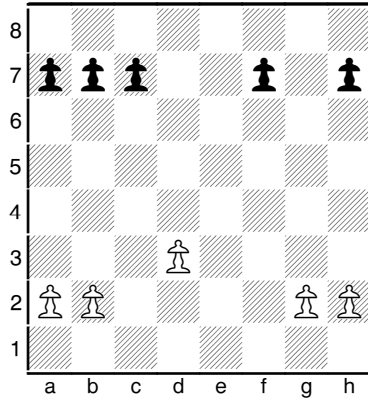
For further practice, with the Kings on their starting squares, have each player set a specified and equal number of Pawns in his first 4 ranks, alternating each player putting down one Pawn at a time. Then, have each player place one Knight, one Bishop, and one Rook, again alternating. Then, begin with White to play and have each player play for a win. Try altering this activity with a various number of Pawns and various combinations of pieces. This type of practice will help you clarify how the Pawns and pieces interact with the space on the board.

OPEN AND CLOSED POSITIONS: EXERCISES

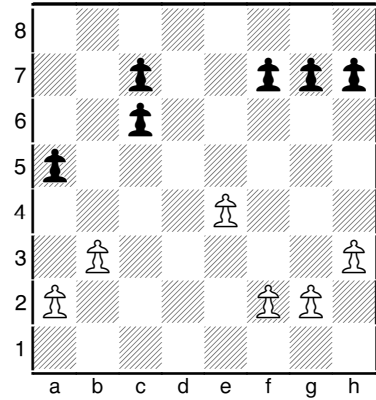
List all the open, half-open, and closed files



#1

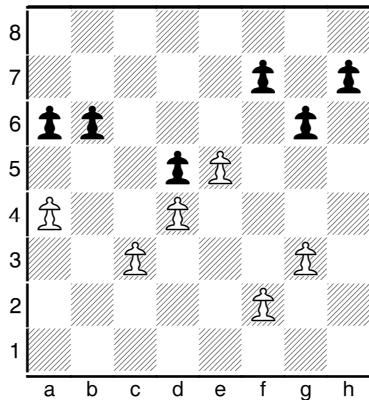


#2

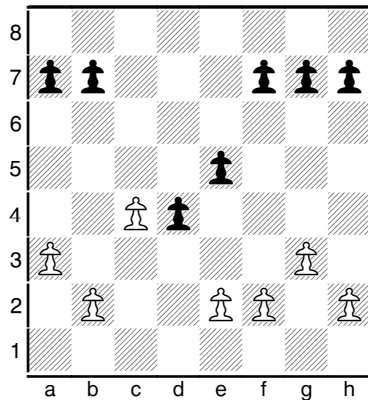


#3

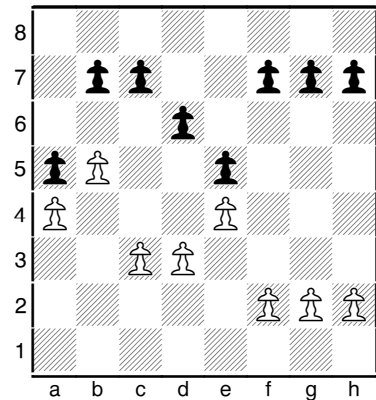
List all the open diagonals on the board longer than 3 squares.



#4

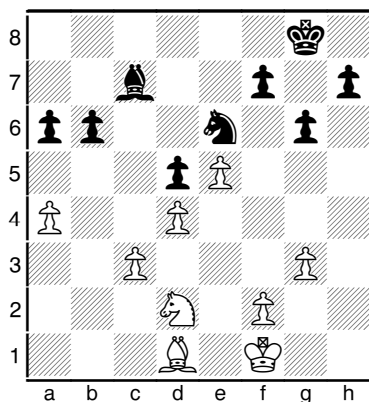


#5

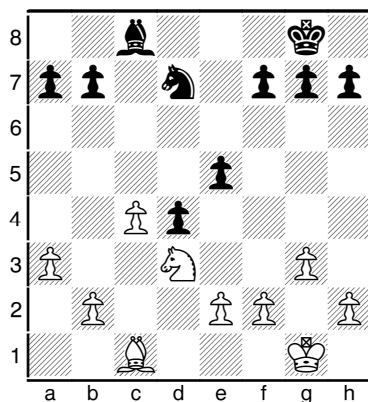


#6

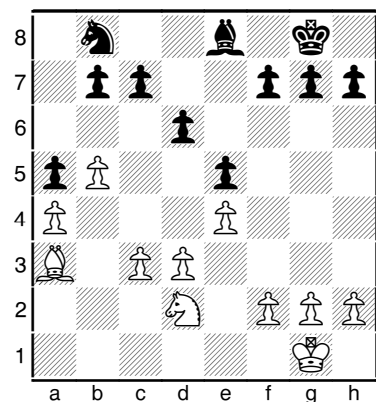
List a strong square for the White and Black pieces and a potential path for reaching it assuming no other Pawns or pieces move.



#7



#8

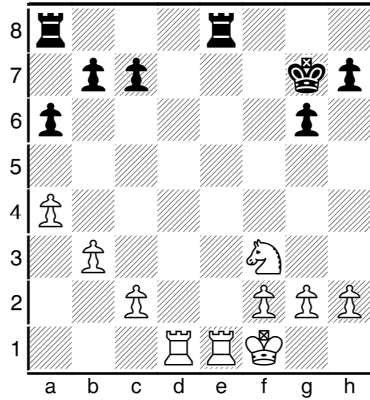


#9

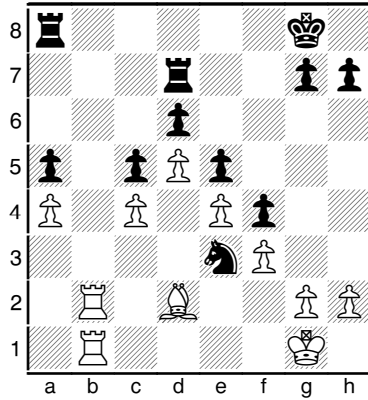
For further practice, with the Kings on their starting squares, have each player set a specified and equal number of Pawns in his first 5 ranks, alternating each player putting down one Pawn at a time. Then, have each player place one Knight, one Bishop, and one Rook, again alternating. Then, begin with White to play and have each player play for a win. Try altering this activity with a various number of Pawns and various combinations of pieces. This type of practice will help you clarify how the Pawns and pieces interact with the space on the board.

PRINCIPLES OF TRADING MATERIAL: EXERCISES

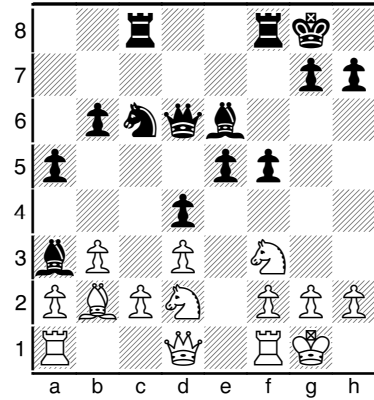
Should White trade pieces, why or why not?



#1

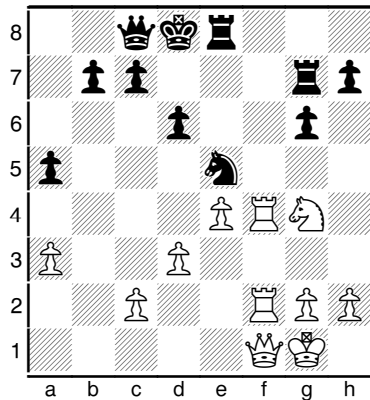


#2

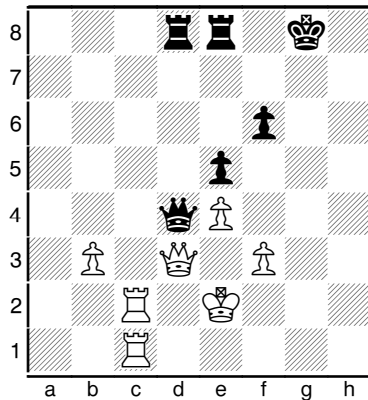


#3

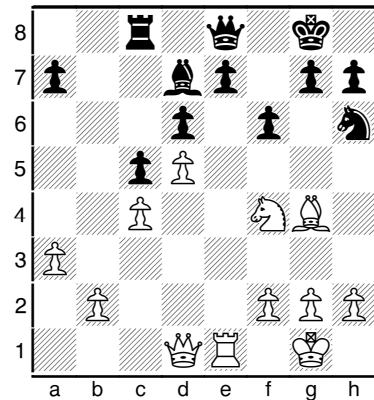
Should White trade pieces, why or why not?



#4

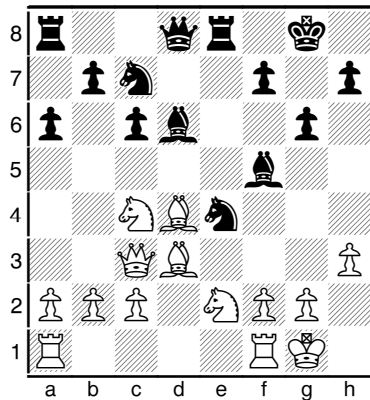


#5

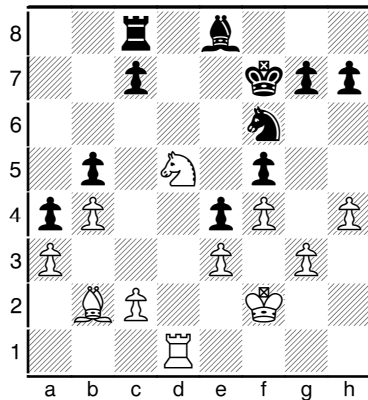


#6

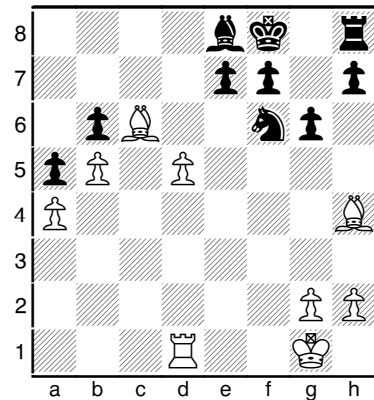
Which piece should White trade? Why?



#7



#8

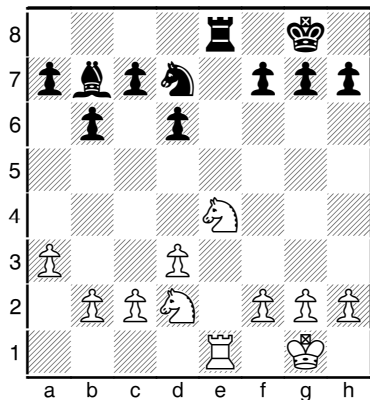


#9

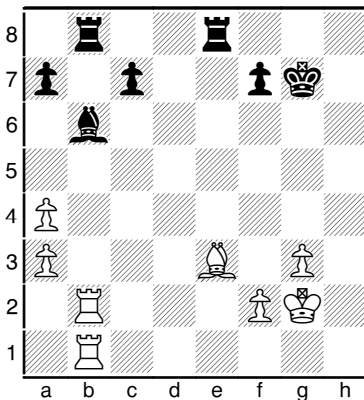
For further practice, find some high-level chess games (PGN)... Each time the players exchange material, try to determine which principle (or principles) of trading was used to initiate the exchange. Take this one step further, and whenever a player moves a piece into tension with another, stop the game and consider whether you believe the trade should occur and why; compare your predictions to the subsequent moves.

FUNDAMENTAL DEFENSE: EXERCISES

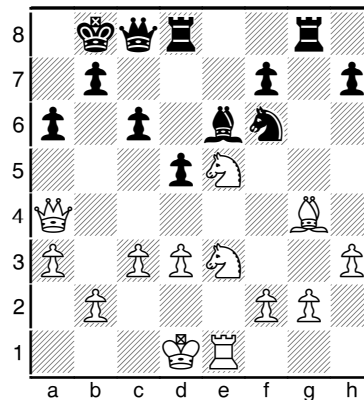
List how many pieces attack and how many pieces defend the selected piece.



#1 (e4-Knight)

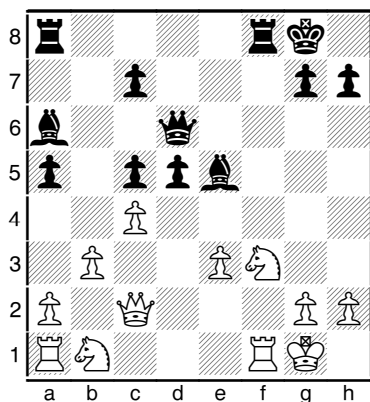


#2 (b6-Bishop)

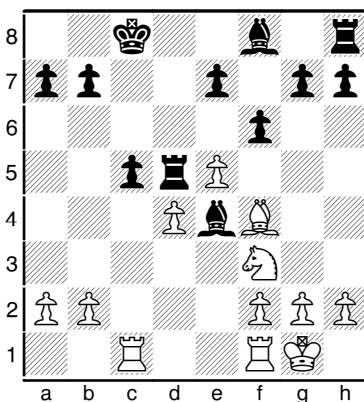


#3 (g4-Bishop)

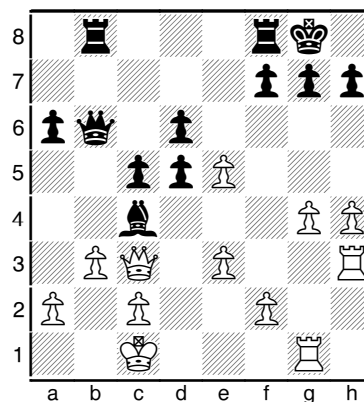
List all the defensive moves that could be made for the selected piece.



#4 (a1-Rook)

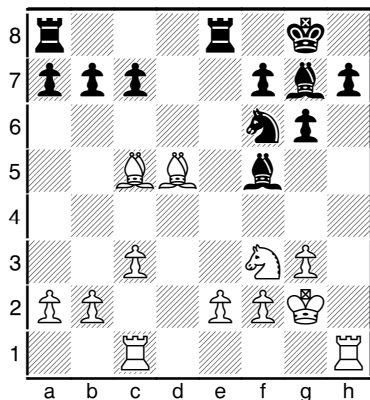


#5 (f3-Knight)

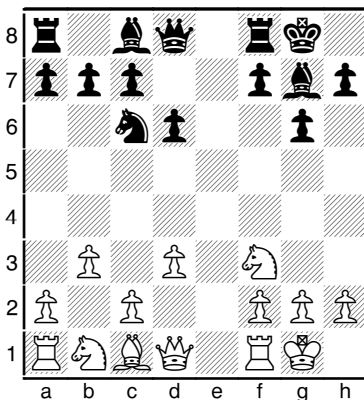


#6 (c4-Bishop)

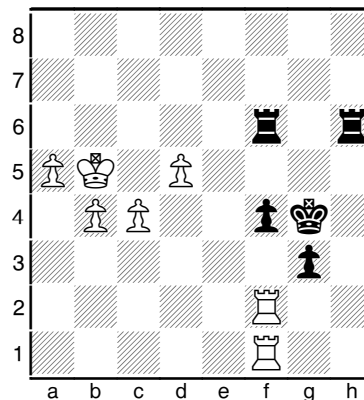
List all defensive options for White, choose one and explain why you chose it.



#7 (d5- Bishop)



#8 (a1-Rook)



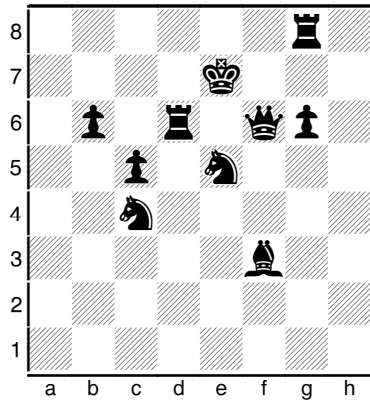
#9 (f2-Rook)

For further practice, play a game to any random position, find a random position from a game, or create a random position... Note every piece that is not defended. Then, note every piece that is under attack and from which pieces it is attacked and for each attacked piece, list out all the defensive options and decide which response is best. Another exercise: place a Black King and one Black major or minor piece on the board. Then, add a White King and a single White piece in a position where it attacks the Black piece. Continue adding White pieces until the Black piece has zero favorable options for defense. Repeat this activity several times using different combinations of attacked and defensive pieces.

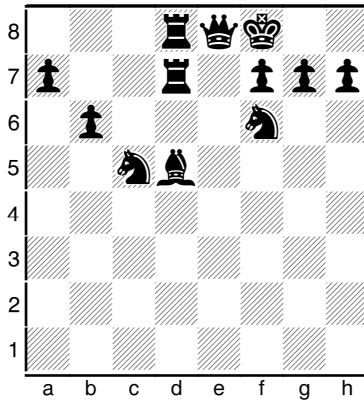
FUNDAMENTAL TACTICS – THE PIN: EXERCISES

List all the squares where...

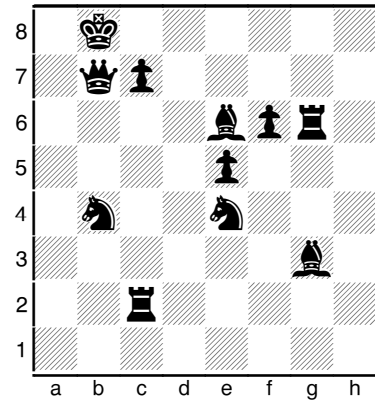
- a White Bishop could pin pieces
- a White Rook could pin pieces



#1

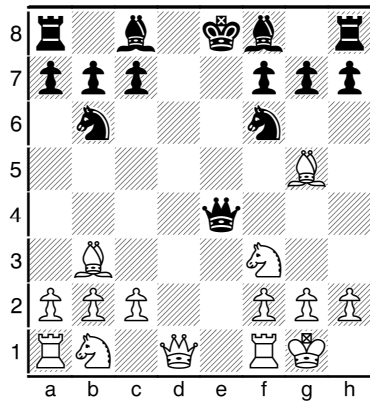


#2

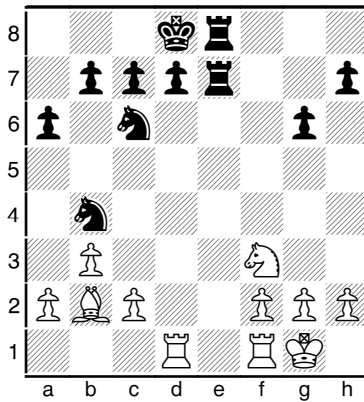


#3

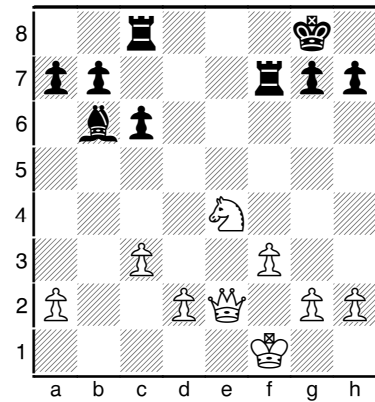
List the move for White that pins a Black piece.



#4

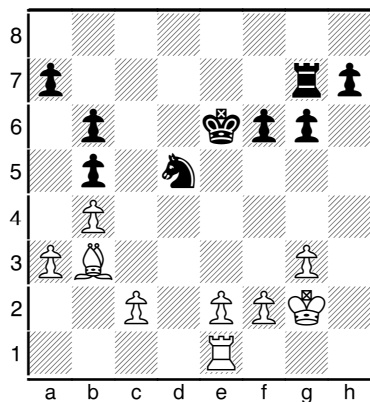


#5

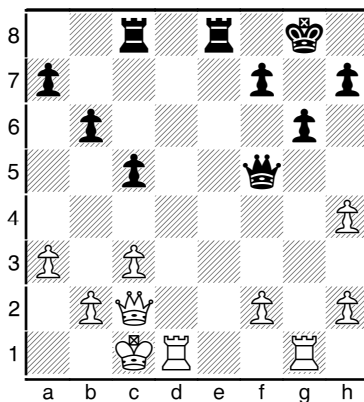


#6

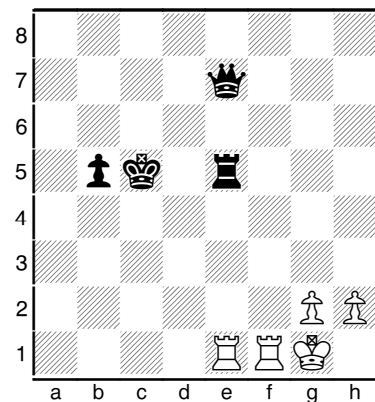
Find the move for White that best takes advantage of the pin.



#7



#8



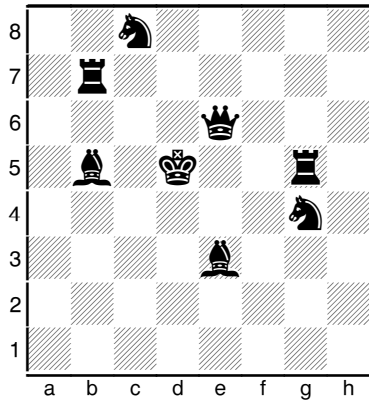
#9

For further practice, find tactics practice resources and practice “Find the Pin” and “Use the Pin” exercises as often as you can. There are numerous tactics workbooks that will do just fine. There are also numerous online resources that are great resources for building a regimented practice schedule with built-in rewards. Also, try constructing your own “Find the Pin” puzzles. Start by placing the pieces that can be pinned, then add opposing pieces. Creating your own puzzles will help you understand how to construct tactical positions.

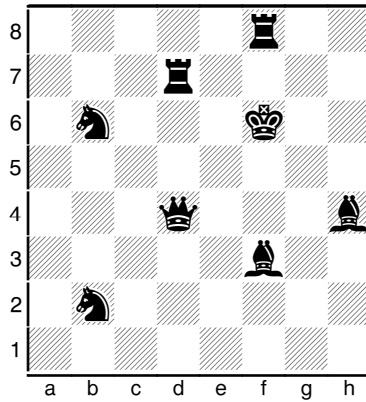
FUNDAMENTAL TACTICS – THE SKEWER: EXERCISES

List all the squares where...

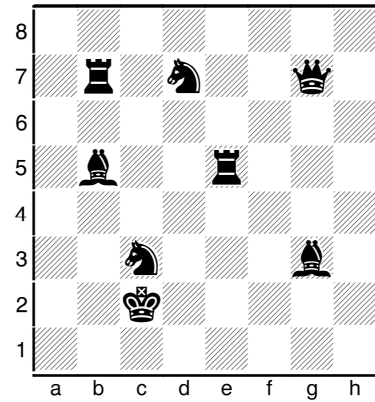
- a White Bishop could skewer pieces
- a White Rook could skewer pieces



#1



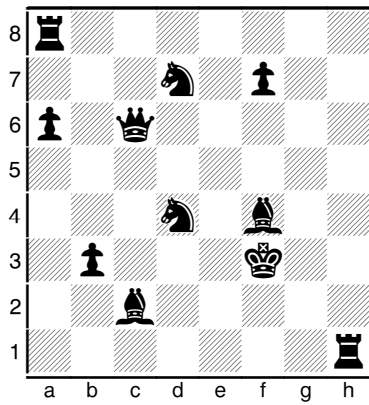
#2



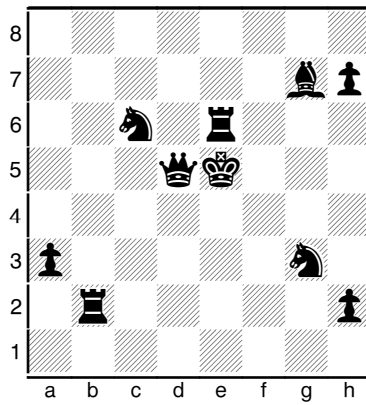
#3

List all the squares where...

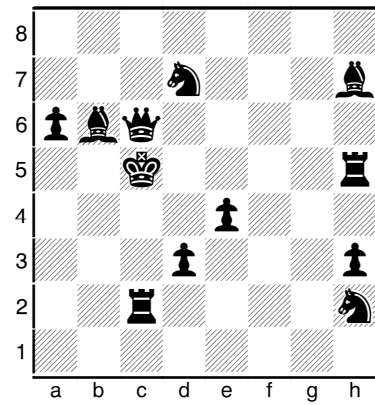
- a White Bishop could skewer pieces
- a White Rook could skewer pieces



#4

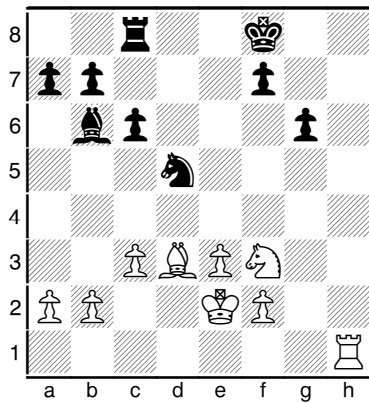


#5

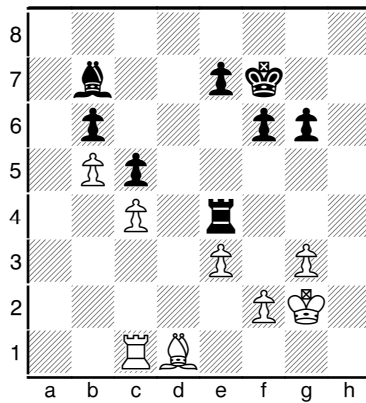


#6

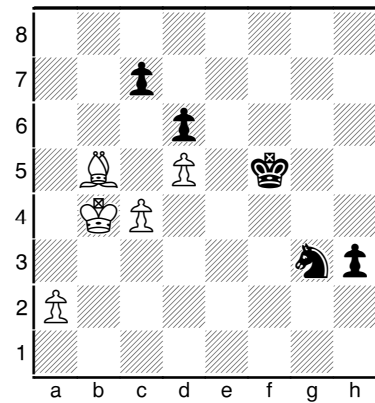
Find the move for White that skewers a Black piece.



#7



#8



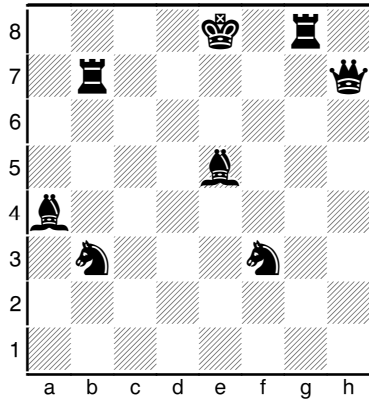
#9

For further practice, find tactics practice resources and practice “Find the Skewer” exercises. Also, try constructing your own “Find the Skewer” puzzles.

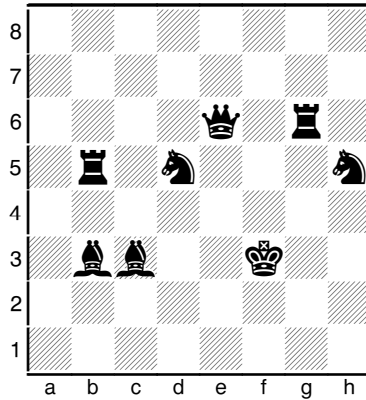
FUNDAMENTAL TACTICS – FORKS: EXERCISES

List all the squares where...

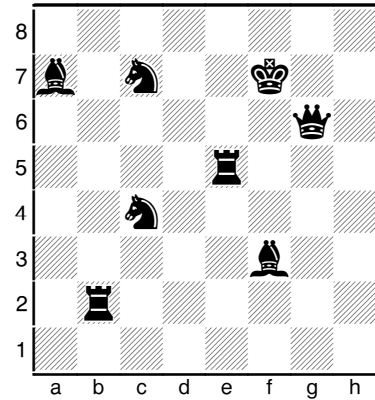
- a White Bishop could attack 2 or more pieces
- a White Rook could attack 2 or more pieces
- a White Queen could attack 2 or more pieces
- a White Knight could attack 2 or more pieces
- a White Pawn could attack 2 or more pieces
- a King could legally attack 2 or more pieces



#1



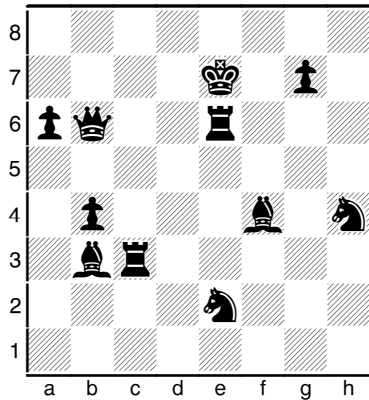
#2



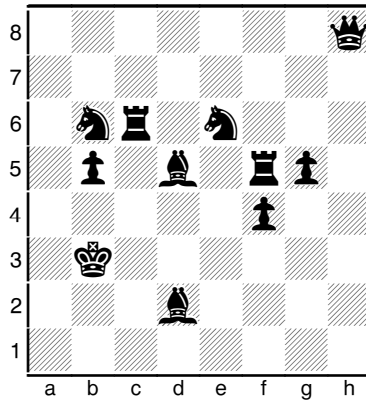
#3

List all the squares where...

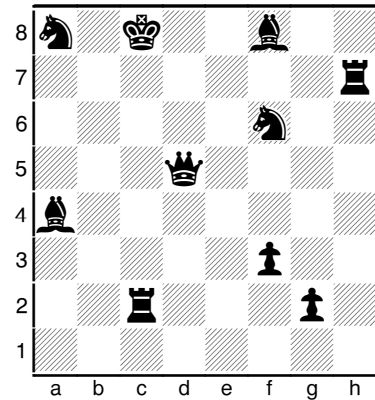
- a White Bishop could attack 2 or more pieces
- a White Rook could attack 2 or more pieces
- a White Queen could attack 2 or more pieces
- a White Knight could attack 2 or more pieces
- a White Pawn could attack 2 or more pieces
- a King could legally attack 2 or more pieces



#4

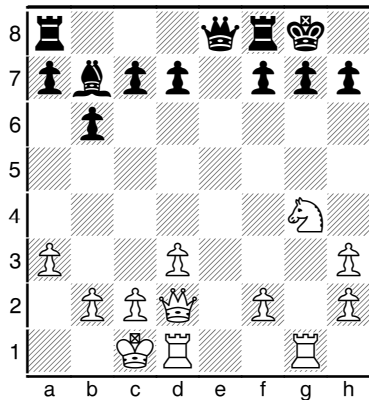


#5

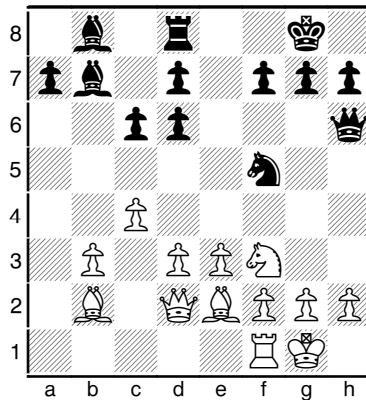


#6

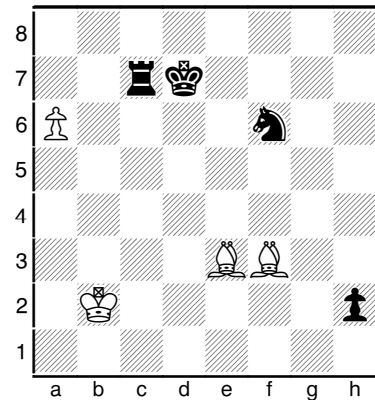
Find the move for White that forks Black pieces



#7



#8

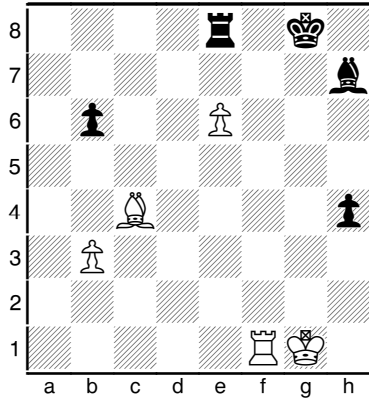


#9

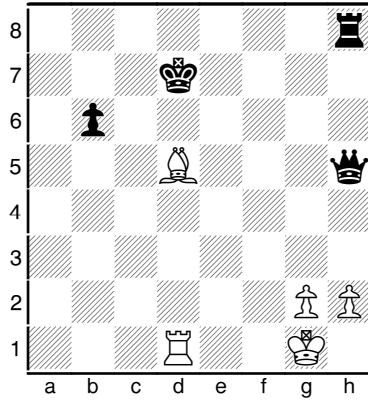
For further practice, find tactics practice resources and practice “Find the Fork” exercises. Also, try constructing your own “Find the Fork” puzzles. Try constructing puzzles where one player has to sacrifice a piece to set up a fork.

FUNDAMENTAL TACTICS – DISCOVERED ATTACKS: EXERCISES

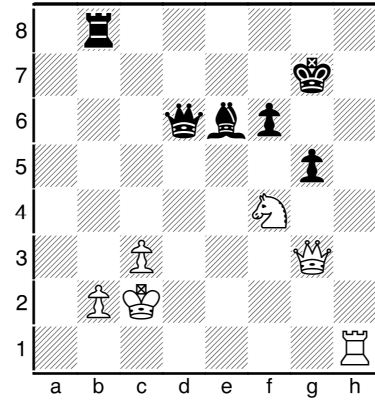
Find the best move for White that delivers a discovered attack.



#1

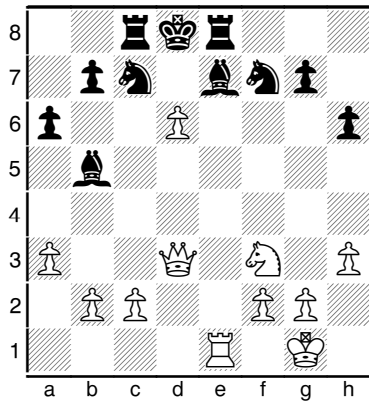


#2

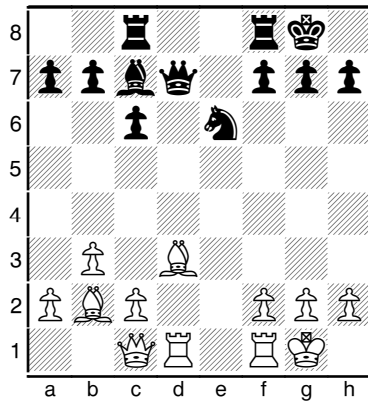


#3

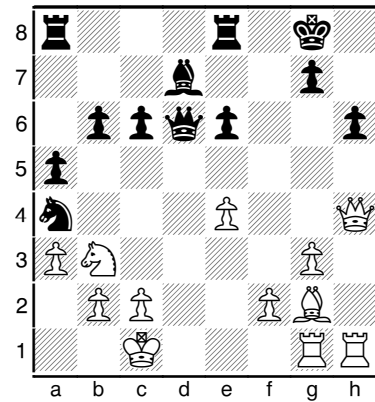
Find the best move for White that delivers a discovered attack.



#4

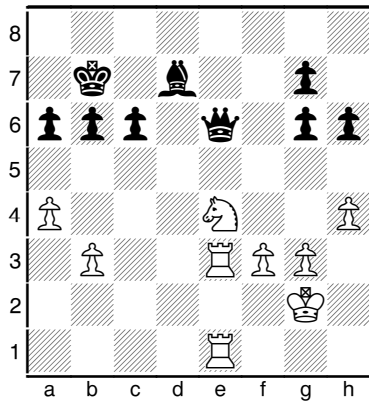


#5

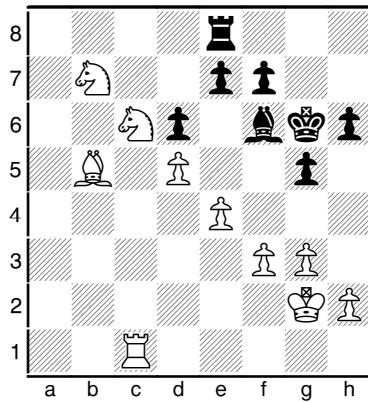


#6

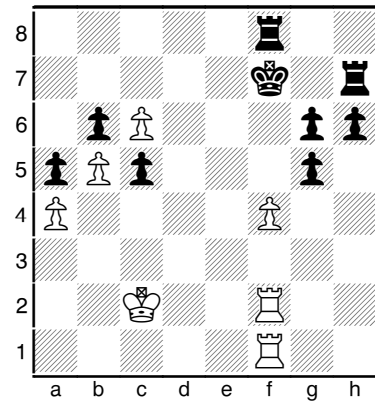
How can Black defend against the possible discovered attack? (Black to move)



#7



#8

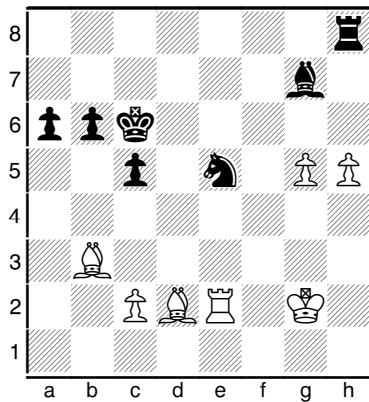


#9

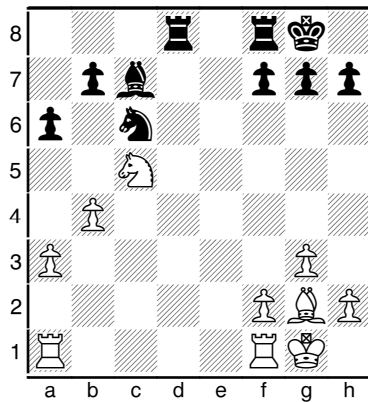
For further practice, find tactics practice resources and practice “Discovered Attacks” exercises as often as you can. There are numerous tactics workbooks that will do just fine. There are also numerous online resources that are great resources for building a regimented practice schedule with built-in rewards. Also, try constructing your own “Discovered Attack” puzzles similar to those above. Creating your own puzzles will help you understand how to construct tactical positions.

FUNDAMENTAL TACTICS – REMOVING THE DEFENDER: EXERCISES

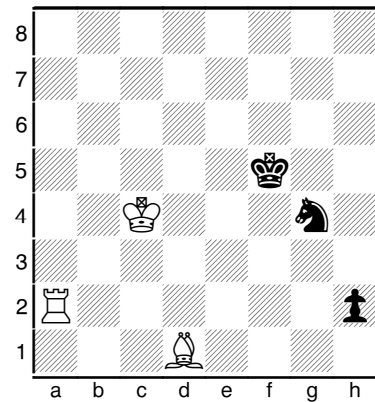
If White wishes to capture the selected piece, which Black defender does White first have to remove? How should White accomplish this?



#1 (e5-Knight)

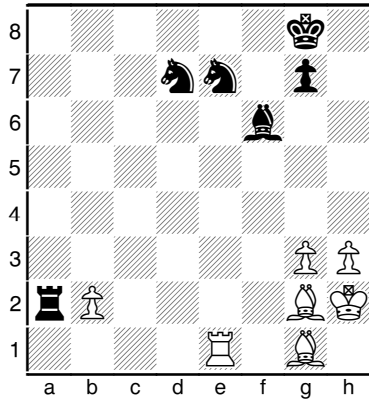


#2 (c6-Knight)

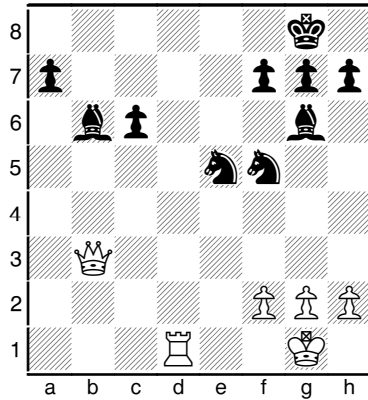


#3 (h2-Pawn)

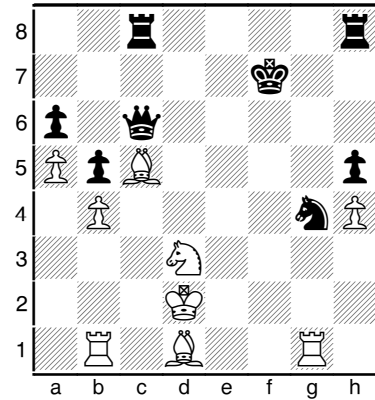
Here, White would like to move a piece to a square that is defended. How should White remove the defender of the objective square?



#4

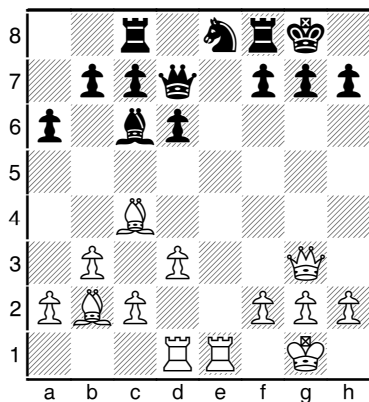


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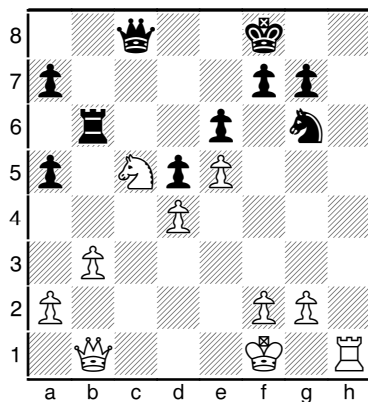


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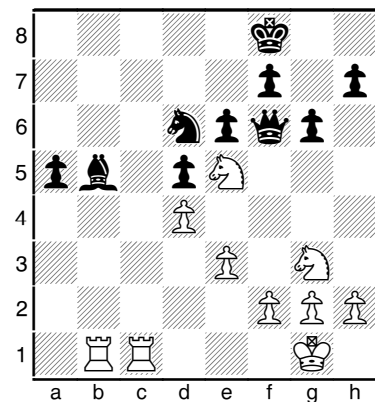
How should White proceed?



#7



#8

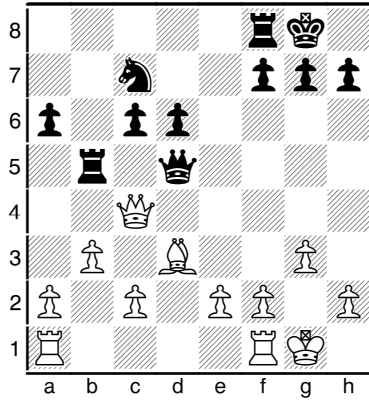


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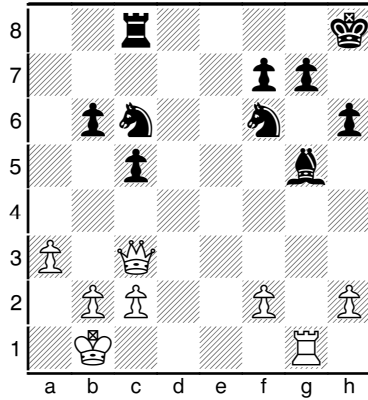
For further practice, find tactics practice resources and practice “Removing the Defender” exercises as often as you can. There are numerous tactics workbooks that will do just fine. There are also numerous online resources that are great resources for building a regimented practice schedule with built-in rewards. Also, try constructing your own “Removing the Defender” puzzles similar to those above. Creating your own puzzles will help you understand how to construct tactical positions.

FUNDAMENTAL TACTICS – COMBINING TACTICS: EXERCISES

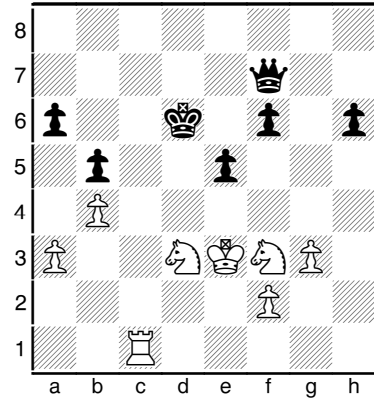
White to move, find the strongest tactical move and write out the continuation.



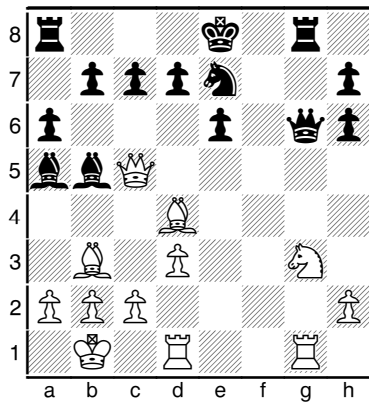
#1



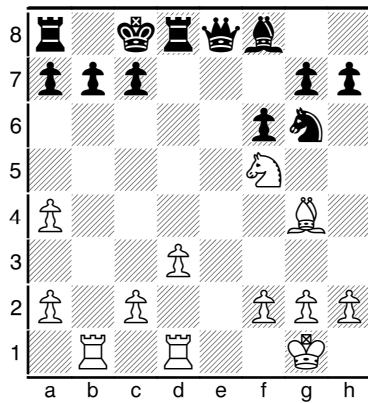
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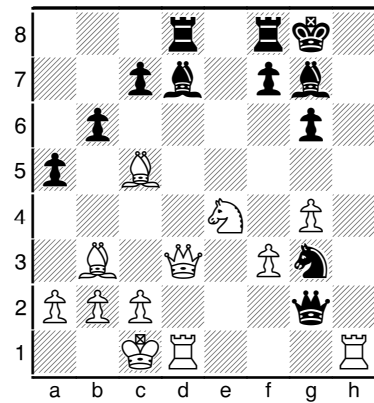
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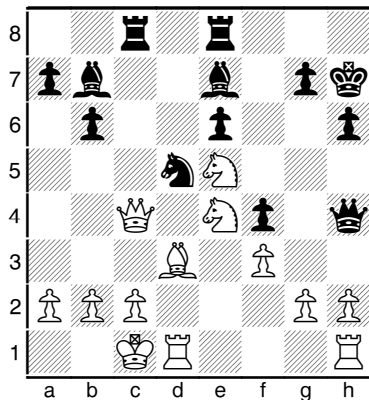
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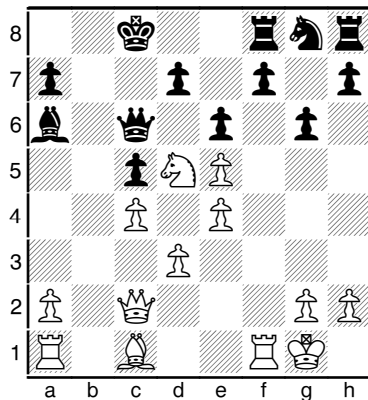
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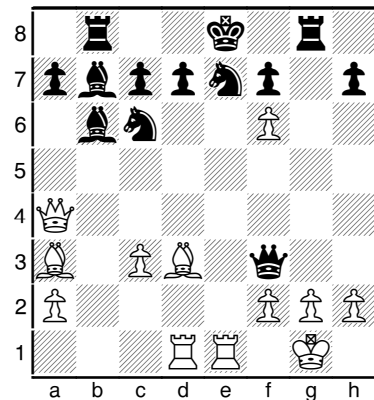
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#7



#8

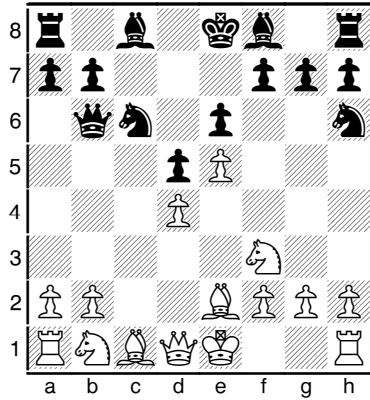


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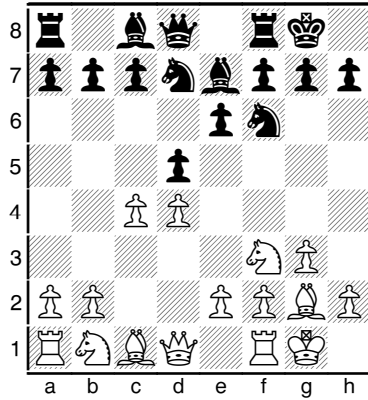
For further practice, find tactics practice resources and practice exercises as often as you can. There are numerous tactics workbooks available for purchase, and there are also numerous online resources that are excellent for building a regimented practice schedule with built-in rewards. Also, try constructing your own tactical puzzles similar to those in this section. Creating your own puzzles will help you understand how to construct tactical positions, a skill you should begin to apply in your games. Finally, there are other tactics that players should be familiar with: overloading, deflection, double attacks, etc. As you progress in your game, it would be wise to learn, study, and practice these tactics as well. The stronger a player becomes tactically, the stronger they become as a chess player.

FUNDAMENTALS OF OPENINGS: EXERCISES

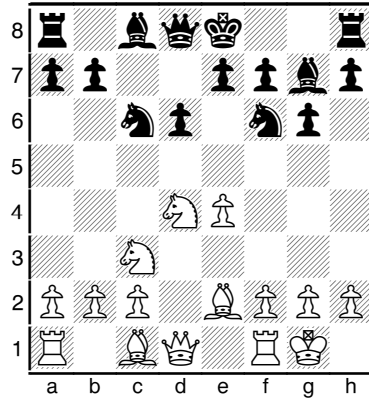
Decide on the next move for White and explain why you chose it.



#1

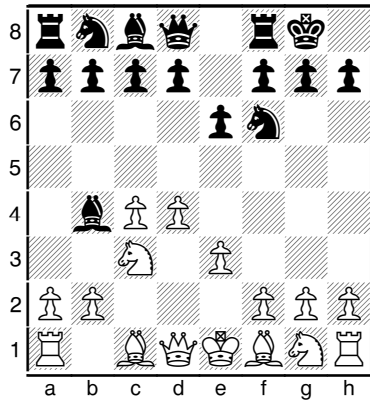


#2

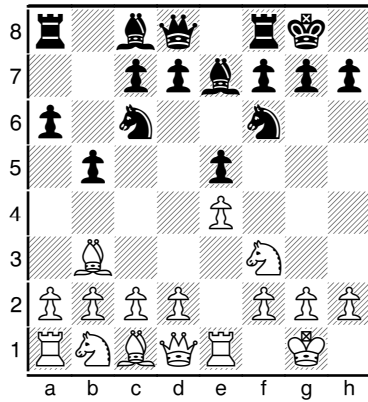


#3

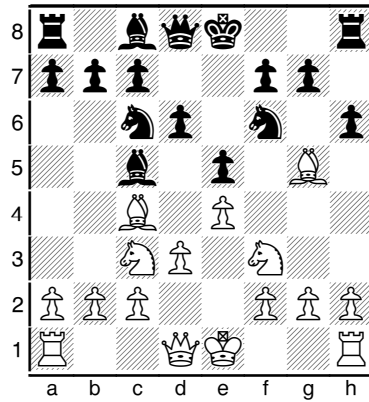
Decide on the next move for White and explain why you chose it. Then, choose a response for Black and explain why you chose that response.



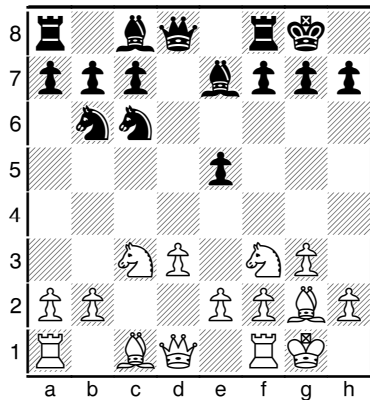
#4



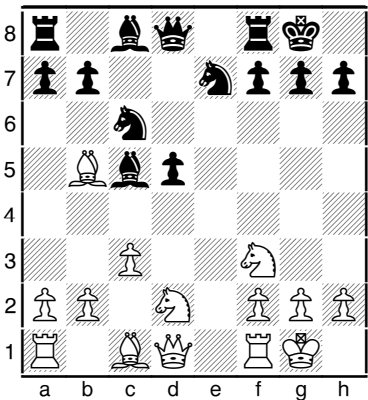
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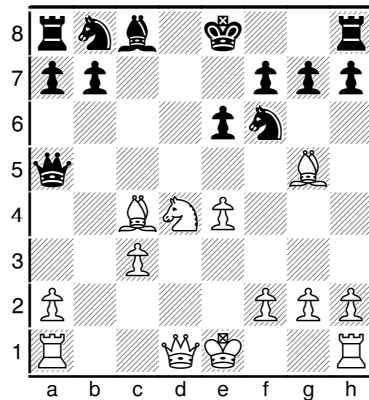
#6



#7



#8



#9

For further practice, choose one opening for White and study it by watching videos online, reading books about it, and by discussing it with players who play it often. Study games of grandmasters who use that opening. As Black, choose one response to 1.e4 and one response to 1.d4. Study the same way for these openings. Learning one or two openings very well generally helps prepare you for other openings. However, it's a good idea to review many of the common openings so you at least have an idea of how they work.

ANSWERS TO EXERCISES

Page 8 - The Board

1. White Star - d5
Black Star - g5
2. White Stars - b-file (b1-b8)
Black Stars - h3-c8 diagonal (h3,g4,f5,e6,d7,c8)
3. White Stars - Rank 3 (a3-h3)
Black Stars - a5-d8 diagonal (a5,b6,c7,d8)
4. White Star -
square b3
b-file, Rank 3 (White's 3rd rank, Black's 6th rank), d1-a4 diagonal and a2-g8 diagonal
White's Queenside Flank
Black Star -
square f7
f-file, Rank 7 (White's 7th rank, Black's 2nd rank), h5-e8 diagonal and a2-g8 diagonal
Black's Kingside Flank
5. White Star -
square g2
g-file, Rank 2 (White's 2nd rank, Black's 7th rank), f1-h3 diagonal and h1-a8 diagonal
White's Kingside Flank
Black Star -
square d5
d-file, Rank 5 (White's 5th rank, Black's 4th rank), a2-g8 diagonal and h1-a8 diagonal
Center Square, Black territory, Queenside
6. White Star -
square e6
e-file, Rank 6 (White's 6th rank, Black's 3rd rank), a2-g8 diagonal and h3-c8 diagonal
Black's territory, Kingside, Center File
Black Star -
square e5
e-file, Rank 5 (White's 5th rank, Black's 4th rank), a1-h8 diagonal and h2-b8 diagonal
Center square, Black territory, Kingside
7. Square g2
g-file, Rank 2 (White's 2nd rank, Black's 7th rank), h1-a8 diagonal and f1-h3 diagonal
White's Kingside Flank
Holds the g-file and Rank 2; 4 squares in Black's territory 10 squares in White's territory
8. Square d4
d-file, Rank 4 (White's 4th rank, Black's 5th rank), a1-h8 diagonal and g1-a7 diagonal
Center Square, White territory, Queenside
Holds b3, c2, e2, f3, f5, e6, c6, b5; 4 squares in Black's territory and 4 squares in White's territory
9. Square a3
a-file, Rank 3 (White's 3rd rank, Black's 6th rank), c1-a3 diagonal and a3-f8 diagonal
White Queenside Flank
Holds the c1-a3 diagonal and the a3-f8 diagonal; 3 squares in White's territory, 4 squares in Black's territory

Page 18 - The Pieces

1. The Knight can move to b4, b6, c7, e7, f4, and e3. It can capture on f6.
2. The Bishop can move to b1, c2, e4, f5, g6, h7, c4, and b5. It can capture on a6.
3. The Rook can move to c3, d3, e3, g3, f1, f2, f4, f5, and f6. It can capture on f7.
4. The Queen can move to b3, b4, b6, b7, a4, c6, d7, e8, a5, c5, d5, e5, f5, a6, c4, and d3. It can capture on b8 and g5.
5. The Pawn can move to e6. It may be able to capture en passant at f6.
6. The Pawn can promote on f8. It can capture and promote on e8.
7. The Black Rook can move to a8, b8, d8, e8, c7, c6, c5, c4, c3, c2, and c1. It cannot capture any pieces.
The White King can move to f1 only. It can capture on d2.

8. The Black Knight can move to b4, a7, d8, e7, and e5. It can capture on d4.
The White Knight can move to c5, e5, f4, e1, and b4. It cannot capture any pieces
9. The Black Bishop can move to e8, e6, f5, and g4. It can capture on h3.
The White Knight can move to g5, h2, g1, and e1. It can capture on d4 and e5.

Page 31 - Endgame

1. Check to the Black King
White Queen to c6, d5, e4, or e8. Or Queen takes Knight on a6.
White Knight to f4 or c5
White Rook to h6 or e1
Check to the White King
Black Knight to b4
Black Bishop to a4
Black Rook to f2
Black Queen to h2 or captures on d3
2. Check to the Black King
b2-Pawn to b3
White Rook captures on b4
White Knight to d6 or e3
White Queen to g4, e2, e4, f1, or d5
Check to the White King
Black Rook to d5
Black Queen to d7, d6, d5, e2, or e1
Black Knight to f2
3. Check to the Black King
White Queen captures on d2 or moves to f7
White Bishop to c5 or h4
White Rook to f8 or h2
Check to the White King
Black Bishop to a5 or e3
Black Rook to b1 or c6
Black Queen to g6
Black King to f3, e2, e1, f1, g2, or g3
4. White to move - Queen to f8
Black to move - Bishop to b5 or d5, Queen to c7 or a6
5. White to move - Rook to h8
Black to move - Rook to d1
6. White to move - Pawn takes en passant on f6
Black to move - Queen to h1
7. Stalemate - Queen to d6
Checkmate - Queen to b8
8. Stalemate - Bishop to b7
Checkmate - Bishop to b5
9. Stalemate - h3-Bishop to e6
Checkmate - Queen to f5 or h3-Bishop to g2

Page 36 - Notation

1. Bxb5 Re6
2. Rd8+ Bf8
3. Rxc8 Rf6
4. Rxc7 Rxc7
5. Qxc7 Qxg2
6. Rd1 Rxf2
7. Be2 Rxe2

8. Nxe2 Qxe2

Page 44 - Fundamental Elements of Chess

1. White - 7 Pawns, 2 Rooks, 1 Knight, 1 Bishop (23)
Black - 7 Pawns, 2 Rooks, 1 Knight, 1 Bishop (23)
2. White - 6 Pawns, 2 Rooks, 1 Bishop, 1 Queen (28)
Black - 5 Pawns, 1 Rook, 2 Bishops, 1 Knight, 1 Queen (28)
3. White - 6 Pawns, 2 Rooks, 1 Bishop (19)
Black - 6 Pawns, 1 Bishop, 1 Queen (18)

Answers will vary for #4-6, some key positional elements are described below

4. White - White Bishop is on open diagonals, the White Knight is under attack and holds b5 with the Bishop, the c-Rook is on an open file, and the f-Rook is blocked by the f-Pawn but can move laterally
Black - Black Bishop is attacking the White Knight and is under attack by the Pawn, the Black Knight is holding important central space, the Black Rook is on an open file and the f-Rook is blocked by the f-Pawn but can move laterally
5. White - Both Rooks are holding the center open files, the Bishop is on the same diagonal as the King and it has movement back towards the King, the Queen is supporting the Bishop and has lots of free movement
Black - Black Rook is stuck in a corner but has lateral movement, Queen doesn't have much mobility but is supporting the light-square Bishop, the Knight is under attack and holding central space, the light-square Bishop is under attack on the same diagonal as the King, dark-square Bishop has lots of mobility and is under attack
6. White - Rooks are forming a battery on the e-file, the Bishop is blocked though all the Black Pawns are targets on light-squares, all the Pawns are on dark squares
Black - Bishop has lots of targets, no Black Pawns block it, the Queen is semi-mobile though it currently has no job
7. White - Nb5
Black - Bxc3, Ne4
8. White - Bxe6+, Bxc6, Qxc5
Black - Bxd5, Na5, Bb4, Bxf2+, Ne5
9. White - Re6+, Re8
Black - Qa8+, Bf2

Page 47 - Opposition

1. White - Ke4
Black - Ke5
2. White - Kd5
Black - Kc6
3. White - Kg3
Black - Kc6
4. White - Kd6
Black - Kc2
5. White - Kb6
Black - Kf5
6. White - Ke2
Black - Kc7
7. 1.Ke2
8. 1.Kd1
9. 1.Kf1

Page 51 - Critical Squares and the Square of the Pawn

1. a7-Pawn: a5, b5
c3-Pawn: b5, c5, d5
d5-Pawn: c3, d3, e3
e2-Pawn: d4, e4, f4
f5-Pawn: e6, f6, g6

- g4-Pawn: f3, g3, h3
2. a5-Pawn: a3, b3
b4-Pawn: a3, b3, c3
c3-Pawn: b2, c2, d2
d3-Pawn: c5, d5, e5
e4-Pawn: d6, e6, f6
f5-Pawn: e6, f6, g6
 3. b4-Pawn: a6, b6, c6
c6-Pawn: b7, c7, d7
e6-Pawn: d4, e4, f4
f7-Pawn: e5, f5, g5
 4. The White Pawn can promote safely if White has the move. 1.g6 Kd6 2.g7 Ke7 3.g8=Q
The White Pawn cannot promote safely if Black has the move. 1...Kd6 2.g6 Ke6 3.g7 Kf7 4.g8=Q Kxg8
The Black Pawn cannot promote safely if White has the move. 1.g6 b4 2.g7 b3 3.g8=Q b2, and White can capture the Black Pawn before it promotes.
The Black Pawn cannot promote safely if Black has the move. 1...b4 2.g6 b3 3.g7 b2 4.g8=Q b1=Q, and since both players have a Queen, they will likely draw.
 5. The White Pawn can promote safely if White has the move. 1.f7 Kd6 2.f8=Q
The White Pawn cannot promote safely if Black has the move. 1...Kd6 2.f7 Ke7 3.f8=Q Kxe8
The Black Pawn cannot promote safely if White has the move. 1.f7 Kd6 2.f8=Q and the White Queen will be able to capture the Pawn while blocking the Black King from defending his Pawn.
The Black Pawn cannot promote safely if Black has the move. 1...Kd6 2.Kc4 Ke6 3.Kd4 Kxf6 4.Ke4 Kg6 5.Kf3 Kf5 6.Kg3 and White has the Opposition, able to keep the Black King from reaching the critical squares of his Pawn.
 6. The White Pawn can promote safely if White has the move. 1.g4 c5 2.g5 c4 3.g6 c3 4.g7 c2 5.g8=Q+
The White Pawn cannot promote safely if Black has the move. 1...Kb7 2.g4 Kc6 3.g5 Kd6 4.g6 Ke6 5.g7 Kf7 6.g8=Q+ Kxg8
The Black Pawn cannot promote safely if White has the move. 1.g4 c5 2.g5 c4 3.g6 c3 4.g7 c2 5.g8=Q+ Kb7 6.Qg2+ (forking the Black King and Pawn) Kb6 7.Qxc2
The Black Pawn cannot promote safely if Black has the move. 1...c5 2.Kg1 c4 3.Kf1 c3 4.Ke1 c2 5.Kd2 c1=Q+ 6.Kxc1
 7. If White has the move, White is better. 1.Kf4 Ke6 2.Kg5 Kf7 3.Kf5 (taking the opposition and the critical squares) Kg7 4.Ke6 Kf8 5.f4 Ke8 6.f5 Kf8 7.Kf6 Kg8 8.Ke7 Kg7 9.f6+ Kg8 10.f7+ Kg7 11.f8=Q+ and White will win
If Black has the move, Black is better because he can force the draw. 1...Ke5 (taking the opposition and critical squares)
 8. If White has the move, White is better. 1. e5+ fxe5+ 2. Ke4 b5 3. b4 a6 4. a3 Ke7 (Black is forced to leave the defense of the Pawn) 5. Kxe5 Kf7 6. f4 Ke7 7. g4 Kf7 8. g5 (Black is forced to either leave the defense of his Pawn to stop the g-Pawn or move back to e7, allowing the g-Pawn to promote when Black will be forced to leave the defense of the e-Pawn)
If Black has the move, White is still better. 1... e5+ 2. Kc4 a6 3. a4 Kc6 4. b4 b5+ 5. Kb3 Kd6 6. a5 Ke6 7. Kc3 Kf7 8. Kd3 Ke7 9. f4 exf4 10. gxf4 Kd6 11. Kd4 (and Black is forced to leave the defense of one side of the board. White will be able to promote at least one Pawn)
 9. If White has the move, White is better. 1.h6 a2 2.h7 a1=Q 3.h8=Q+, skewering the Black King and Queen. Black must respond to the check by moving the King off the diagonal, and White will capture the Black Queen and then win with the King-Queen v. King endgame
If Black has the move, Black is better. 1...a2 2.h6 a1=Q 3.h7 Ke4 (Black opens the diagonal so the Black Queen now prevents the White Pawn from promoting, Black will capture the Pawn and then force the win)

Page 55 - Pawn Structure

Answers in this section may vary. The responses provided below include many of the key elements that should be considered when noting Pawn structure and its influence on material.

1. White has 2 Pawn islands: Pawns on the c- through h-files and 1 isolated a-Pawn, a Pawn chain (e2-d3-c4), no backwards, doubled or passed Pawns.
Black has 2 Pawn islands: a-b-c files and e-f-g-h files, the c-Pawn will be difficult to connect because of the advanced White a-Pawn

2. White has 2 Pawn islands: a-b files and e-f-g files, a- and b-Pawns are connected, the f-Pawn is backwards
Black has 2 Pawn islands: doubled and isolated Pawns on the b-file and another island on the e-f-g files, the f-Pawn is backwards
3. White has 2 Pawn islands: a-b-c files and f-g files, the b-Pawn is backwards, and the f- and g-Pawns are connected
Black has 3 Pawn islands: a-b files, f-g files, and an isolated passed Pawn on the d-file, the a- and b-Pawns are connected, and the f- and g-Pawns are also connected
4. The Pawn structure leaves the b-file and d-file half open and open diagonals on much of the board. The Kingside is free of Pawn clutter, but that may change. The Queenside has lots of Pawn activity that can change. White has more Queenside space since White's Queenside Pawns have advanced further and restrict Black's Queenside
5. The Pawn structure leaves the c-, d-, and h-files open and the a-file half-open. Many of the diagonals are blocked. The Kingside is cluttered with Pawns that will probably not change, and the Queenside has Pawns that may shift but are currently stuck in place. Neither side has a spatial advantage.
6. The Pawn structure leaves the e- and h-files open and the c- and d-files half-open. The a1-h8 and b1-h7 diagonals are open, the rest are fairly blocked. Black has a slight Kingside space advantage and White has a large Queenside space advantage.
7. White's b1-Rook is on a good file because it has no White Pawns blocking it and it's attacking the Black b-Pawn. The f1-Rook is blocked in, but once the Queen moves, it will be more mobile. The White g2-Bishop is well placed on an open diagonal and it also attacks Black's b7-Pawn. The d2-Bishop has a lot of mobility along the c1-h6 diagonal though the Knight blocks the e1-a5 diagonal. The c3-Knight is currently blocked by the Black Pawns, but it can maneuver behind them after moving to a4 or e4. The Queen can move along the d1-a4 diagonal, but is currently blocked in by White's Pawns.
Black's b8-Rook is on a good file because it defends the b-Pawn and is prepared to be active once the b-file opens. The f8-Rook is currently blocked, but that can change later. The Black d7-Bishop has one diagonal to move along, and is blocked by the Black e-Pawn. The e7-Bishop has one good diagonal and can maneuver to stronger diagonals if needed. The c7-Knight is blocked by Black Pawns and White's Pawns. The Black Queen is blocked by Black pieces, but not by Pawns.
8. White's Rook is on a good open file, and it has full lateral mobility along the back rank, so it can easily reach the open c-file, open h-file, or lend support on the half-open a-file. White's Bishop is a "good" Bishop, but it is not currently well positioned; its best diagonal would be the g1-a7 diagonal where it would target the unprotected b6-Pawn. In order to be more effective, this Bishop needs to be activated. The White Knight is currently in a poor position; it is attacking the unprotected b-Pawn, but other than that, it has no good squares. The Knight should look to post on the d5 or f5-square, d5 being better because from there, the Knight could also target Black's f-Pawn. The White Queen is currently stuck behind the White pieces, but she's supporting the a-Pawn. The Queen could improve by finding a more active line to occupy, perhaps the a2-g8 diagonal.
Black's Rook is on a good open file, and it has much mobility along the back rank to reach the other open files or lend support if needed. The Black Bishop is a "bad" Bishop, but it is on its best diagonal, putting pressure on White's Pawns. The Black Knight is ready to leap into a post on d4 or f4 where it will control much of the space around White's King. The Black Queen is currently positioned to attack White's Pawn along the a-file, but otherwise it is currently blocked from being fully mobile.
9. White's Rook is poorly positioned behind a blocked Pawn structure, though it has full mobility along the back rank, so it can easily move to a stronger position. The White Bishop is on a strong open diagonal, but it has no strong targets (it aims at a6, which is protected). The White Knight is near the side of the board and has little forward mobility. The White Queen has full mobility along the 2nd rank and is supporting the Bishop along the b1-h7 diagonal; though she is blocked from moving forward, she is in a strong supporting position.
Black's Rook is on a strong open file and has full mobility along the back rank to reposition, if necessary. The Black Bishop is slightly cramped and but has the potential to find a stronger position since the a4-e8 diagonal is open. The Black Knight is awkwardly positioned with no prospects for repositioning strongly within the next several moves; though it is centrally positioned, the Pawn structure prevents it from finding a better position. The Black Queen is on an open file, vulnerable to tactics, though she can easily reach the open long diagonal (a1-h8).

Page 59 - Weak Squares, Holes, and Outposts

1. b5 - 1 White Pawn, 1 Black Pawn currently hold, none can potentially hold
b4 - 1 Black Pawn currently holds, none can potentially hold
e4 - 1 White Pawn currently holds, 1 more White Pawn can potentially hold and 1 Black Pawn can potentially hold
e5 - No Pawns currently hold, 2 White and 2 Black Pawns can potentially hold
2. d6 - No Pawns currently hold, 1 White Pawn can potentially hold
d3 - No Pawns currently hold, 1 Black Pawn can potentially hold
e6 - No Pawns currently hold, 1 White Pawn can potentially hold
e3 - No Pawns currently hold, 1 Black Pawn can potentially hold
f4 - 2 Black Pawns currently hold, no other Pawns hold or can hold
f5 - 2 White Pawns currently hold, no other Pawns hold or can hold
3. c6 - 1 Black Pawn currently holds, 1 White Pawn can potentially hold
c7 - No Pawns currently hold, 1 White Pawn can potentially hold
d4 - No Pawns currently hold, no Pawns can potentially hold
d3 - No Pawns currently hold, no Pawns can potentially hold
4. White: Weak Squares - e3, f3, d4; Holes - a3, b3, c3, e3, h3, a4, b4; Outposts - b6
Black: Weak Squares - c6, b5, d5, e5; Holes - b6, d6, ; Outposts - b4
5. White: Weak Squares - All squares in White's territory have been weakened; Holes - b3, c3, d3, e3, g3, h3, a4, c4, d4, f4, h4; Outposts - f5
Black: Weak Squares - All squares in Black's territory have been weakened; Holes - a6, c6, d6, e6, g6, h6, d5, f5, h5; Outposts - f4, c4
6. White: Weak Squares - All squares in White's territory have been weakened; Holes - a3, b3, c3, d3, e3, g3, h3, a4, c4, d4, h4; Outposts - b6, d6, h5
Black: Weak Squares - All squares in Black's territory have been weakened; Holes - b6, d6, e6, f6, g6, h6, e5, f5, h5; Outposts - b5, c4, e3, g3, h4
7. White Knight - best square is b6 by way of Na4-Nb6
White dark-square Bishop - best square is anywhere on the a1-h8 diagonal by way of 1.Na4 2.Bc3
White light-square Bishop - is already well positioned
Black Knight - best square is b4 by way of Ne8-Nf6-Ng4-Ne5-Nc6-Nb4
Black dark-square Bishop - best square is f6 by Bf6
Black light-square Bishop - best square is c6 by Bc6
8. White Knight - best square is d5 by Nd5
White Bishop - best square is e3 by Be3
Black Knight - best square is d4 by Nd4
Black Bishop - best square is d6 by Bd6 after Nd4
9. White Knight - best square is f5 by Nd4-Nf5 (d4 is covered, but there is no other safe route)
White Bishop - best square is f5 by Bf5
Black Knight - best square is b5 by Kc8-Nc7-Nb5
Black Bishop best square is c6 by Bc6

Page 66 - Open and Closed Positions

1. Open Files - g
Half-Open Files - c, e, f, h
Closed Files - a, b, d
2. Open Files - e
Half-Open Files - c, d, f, g
Closed Files - a, b, h
3. Open Files - d
Half-Open Files - b, c, e
Closed Files - a, f, g, h
4. a3-f8, c1-h6, d1-h5, h4-d8, h3-c8
5. c1-h6, a4-e8, a5-d8, d1-a4, e1-a5, h3-c8, h4-d8
6. c1-h6, d1-h5, h3-c8, h4-d8
7. White Knight - f6 by Nf3-Nh2-Ng4-Nf6

- White Bishop - f3 by Bf3
- Black Knight - c4 by Nd8-Nb7-Na5-Nc4
- Black Bishop - g5 by Bd8-Bg5
- 8. White Knight - d5 by Nb4-Bd5
- White Bishop - b4 by Bd2-Bb4
- Black Knight - c5 by Nc5
- Black Bishop - f5 by Nc5-Bf5
- 9. White Knight - d5 by Nf1-Ne3-Nd5
- White Bishop - e3 by Bc1-Be3
- Black Knight - d4 by Nd7-Nf8-Ne6-Nd4
- Black Bishop - e6 by Bd7-Be6

Page 73 - Principles of Trading Material

1. Yes, White should trade pieces since White is up a Pawn and a Knight. Trading the Rooks here helps White to increase his advantage.
2. Yes, White should trade the Bishop for the Knight because the Knight is strongly placed, influencing White's position. Trading the Bishop for the Knight would eliminate this strongly positioned piece and trade it for White's bad Bishop.
3. Yes, White should trade the Bishops. White is currently very cramped and trading the equal Bishops will leave White with a little more space to maneuver.
4. No, White should not trade the Knights. Material is equal and having the extra piece on the board will allow White to put more pressure on Black's position. Try 1.Nf6 attacking Black's e8-Rook.
5. No, White should not trade Queens immediately. It would be better to offer the trade on c4: 1.Qc4+. After Black replies 1...Qxc4+, White can recapture with 2.bxc4, moving the passed Pawn onto the same file as the Rook battery, creating a serious problem that Black must defend. This makes White's slight material advantage stronger.
6. Yes, White should trade the Bishops. This will remove the defender of the e6-outpost and allow the White Knight to occupy that outpost without being threatened by Black.
7. White should trade the Bishop for Knight (1.Bxe4). This removes a powerful Black Knight from the center of the board, and it also sets up a tactical shot to gain a piece: 1.Bxe4 Bxe4, 2.Bf6 (attacking Black's Queen and forcing Black to defend) 2...Be7 (blocking the Rook from defending on e4), 3.Nxe4 picking up the extra piece and defending the f6-Bishop a 2nd time.
8. White should trade the Knights on f6. Since the White Bishop also holds f6, Black is forced to take back 1...gxf6. In making this trade, White forces Black to weaken his Pawn structure while also allowing the White Bishop to become more active. If White were to trade the Bishop for the Knight, White would have to play a Knight vs. Bishop endgame in a game where the Pawns will likely be traded, leaving the board more open, favoring the Bishop. If White fails to trade the material, Black will be left with a stronger Bishop and therefore a stronger game.
9. White should trade the h4-Bishop for the Knight on f6. Black will be forced to recapture with 1...exf6. That leaves White with a protected passed e-Pawn. If White were to trade the c6-Bishop for Black's e8-Bishop, Black would have the chance to protect against White's Pawn (1.Bxe8 Kxe8 2.d6 Nd7)

Page 78 - Fundamental Defense

1. 2 pieces attack (Black Rook and Bishop), 3 pieces defend (d2-Knight, Rook, and d3-Pawn)
2. 3 pieces attack (White Bishop and both Rooks), 3 pieces defend (b8-Rook and the a- and c-Pawns)
3. 4 pieces attack (Black Queen, Bishop, Knight, and Rook), 4 pieces defend (h3-Pawn, both White Knights, and the Queen)
4. Escape - The Rook cannot escape since it is blocked in by the a2-Pawn and the b1-Knight
 Remove - White can capture the e5-Bishop with the f3-Knight
 Block - White can block the attack by moving Nc3, Nd4, Qc2, or Qc3
 Defend - White can only defend the Rook by moving Qc2 or Qc3, blocking the attack, defending the Rook, but also placing the Queen in danger.
 Counter - White can counter-attack by moving Ng5 which threatens a checkmate (Qxh7#)
5. Escape - The White Knight can escape with Ng5, Nh4, Nd2, or Ne1
 Remove - White cannot capture the e4-Bishop to remove the threat

Block - White cannot block the attack since there is no space between the attacker and attacked pieces
Defend - The Knight is already defended by the g2-Pawn, but White can defend it again with Rc3, allowing White to recapture with the Rook and keep the Pawn structure intact
Counter - White can counter-attack with Rxc5+ (checking the King and attacking the Rook), Nd2 (attacking the Bishop)

6. Escape - The Bishop can escape to b5, d3, e2, or f1
Remove - Black could remove the attack by capturing Qxb3
Block - Black cannot block the attack since there is no space between the attacker and attacked pieces
Defend - The Bishop is already defended, but Black can defend the Bishop again with Qb5 or Qb4
Counter - Black can counter-attack with 1...d4. After the Pawn exchanges, the Bishop can then also escape to d5 or e6
7. Escape - The Bishop can escape to e6, c6, c4, b3, or e4
Remove - White cannot remove the attacking Knight
Block - White cannot block the attack
Defend - White can defend the Bishop with 1.c4, 1.Rd1, or 1.e4
Counter - White can counter-attack with 1.Bxb7, 1.Bxf7+, 1.g4, 1.e4, 1.Nd4, or 1.Nh4
Move - I would move to escape the attack with 1.Bc4 which also protects the threatened e2-Pawn. Taking on b7 is tempting, but it would open up another file for the Black Rooks to use which isn't so appealing at the moment (it would give White something else to have to defend against)
8. Escape - The Rook cannot escape the attack
Remove - White cannot remove the attacking Bishop
Block - White can block the attack with 1.Nc3, 1.c3, 1.Bb2, 1.d4, or 1.Ne5
Defend - White cannot defend the Rook
Counter - White's only counter-attack is to move 1.Bg5
Move - I would move 1.Bg5. With so few options, counter-attacking might buy White enough time to move the Bishop and the Knight, allowing the Rook to escape along the back rank. White should have been more careful in making opening moves so as not to reach this prickly position in the first place. White's best defense would have been to be on guard earlier.
9. Escape - The Rook can escape to a2, b2, c2, d2, e2, g2, h2, and f3
Remove - White cannot remove the attacking Pawn
Block - White cannot block the attack
Defend - The Rook is already defended once by the f1-Rook and cannot be defended a second time
Counter - White could counter-attack with 1.Rxf4+ or 1.Rg1 (preventing the Pawn from capturing on f2 because doing so would expose the Black King to check.
Move - I would move 1.Rg1, pinning the g3-Pawn against the Black King. The Rooks need to maintain their position at the bottom of the board to prevent the Black Pawns from promoting, and this might be the best way. After stopping the capture, White's best defense to continue is to push his own passed Pawns forward, forcing Black to defend against a promotion as well.

Page 82 - Fundamental Tactics: The Pin

1. Bishop - g5, h4, d4, c3, c2, a1, b3, a2, f4, g3, h2, b4, a3
Rook - a6, c6, h6, a5, b5, e1, e2, e3, e4, f1, f2, c6, c7, c8, g1, g2, g3, g4, g5
2. Bishop - c6, b4, a4, b4, a3, g5, h6, g6, h5, h7
Rook - a6, a5, b5, e5, f5, g5, h6, d4, d3, d2, d1, a8, b8, c8
3. Bishop - d6, f3, g2, h1, d3, f5
Rook - b3, b2, b1, c8, g1, g2, b5, b6
4. 1.Re1
5. 1.Bf6 or 1.Ba3
6. 1.Qc4
7. 1.e4 or 1.Rd1
8. 1.Qxf5
9. 1.Rf5

Page 84 - Fundamental Tactics: The Skewer

1. Bishop - e4, f3, g2, h1, h6, d7, f5, a2, b3, c4, a6

- Rook - b8, e7, e8, g6, g7, g8, e5, f5
- 2. Bishop - g7, g8, e7, e8, e3, f2, g1, e5
Rook - d3, d2, d1, f7, a4, b4, c4, f4, f5, g6, h6
- 3. Bishop - f6, h8, a4, e8, d6, c7, b8
Rook - c1, g8, h7, a7, b8, f5, g5, h5
- 4. Bishop - g2, e4, d5, a4, b5, c1
Rook - f1, f2, g3, h3, c7, c8, d6, e6, f6, g6, h6, c7, b7, a7, g4, h4, c4, b4, a4
- 5. Bishop - d6, c7, b8, c3, d4, f6, c4, b3, a2, e4, f3, g2, h1, f4, c1
Rook - f5, g5, h5, e4, e3, e2, e1, f6, g6, h6, a2, f7, e7, d7, c7, b7, a7
- 6. Bishop - d4, e3, f2, g1, b5, a4, b7, a8, b1, c8
Rook - c4, c3, b5, a5, d6, e6, f6, g6, h6, a2, b2, h6, d8, c7, b7, a7, h1
- 7. 1.Rh8+
- 8. 1.Bf3
- 9. 1.Bd7+

Page 87 - Fundamental Tactics: Forks

- 1. Bishop - d1, c2, c4, e4, b5, d5, h5, c6, e6, g6, d7, f7
Rook - a3, c3, d3, e3, g3, h3, b4, e4, f4, g4, h4, a5, b5, f5, g5, h5, b6, e6, a7, c7, d7, e7, f7, g7, a8, b8, f8, h8
Queen - a1, b1, d1, h1, a2, b2, c2, e2, g2, h2, a3, c3, d3, e3, g3, h3, b4, c4, d4, e4, f4, g4, h4, a5, b5, d5, f5, g5, h5, a6, b6, c6, e6, f6, g6, a7, c7, d7, e7, f7, g7, a8, b8, c8, f8, h8
Knight - d2, d4, a5, c5, g5, d6, f6
Pawn - f7
King - a3
- 2. Bishop - d1, c2, e2, d3, a4, c4, e4, g4, f5, c6, d7, f7, e8
Rook - d3, e3, g3, h3, b4, c5, e5, f5, g5, b6, c6, d6, f6, h6
Queen - b1, d1, e1, f1, h1, b2, c2, d2, e2, g2, d3, e3, g3, h3, a4, b4, c4, d4, e4, g4, a5, c5, e5, f5, g5, a6, b6, c6, d6, f6, h6, b7, d7, f7, h7, c8, e8, g8, h8
Knight - d2, d4, f4, h4, c5, e5, g5, f6, c7, e7, g7, f8
Pawn - c4, f5
King - None
- 3. Bishop - e2, c3, d3, d4, e4, d5, h5, b6, d6, e6, b8
Rook - a2, c2, e2, f2, g2, a3, b3, c3, e3, g3, a4, b4, e4, f4, g4, a5, b5, c5, f5, g5, a6, b6, c6, e6, f6, b7, d7, e7, g7
Queen - a1, b1, c1, f1, g1, a2, c2, e2, f2, g2, h2, a3, b3, c3, d3, e3, g3, a4, b4, d4, e4, f4, g4, a5, b5, c5, d5, f5, g5, h5, a6, b6, c6, d6, e6, f6, b7, d7, e7, g7, h7, a8, b8, e8, g8
Knight - d2, d3, h4, b5, g5, c6, d6, h8
Pawn - b6
King - c3, f4
- 4. Bishop - d1, e1, d2, f2, d3, e3, g3, c4, d4, g4, a5, b5, c5, d5, e5, g5, d6, f6, h6, c7, c8, d8, f8
Rook - a2, b2, c2, f2, g2, h2, a3, e3, f3, g3, h3, a4, c4, d4, e4, g4, b5, e5, c6, d6, f6, g6, h6, a7, b7, c7, f7, h7
Queen - a1, c1, d1, e1, f1, g1, a2, b2, c2, d2, f2, h2, a3, d3, e3, f3, g3, h3, a4, c4, d4, e4, g4, a5, b5, c5, d5, e5, f5, g5, h5, c6, d6, f6, g6, h6, a7, b7, c7, d7, f7, h7, b8, c8, d8, f8, g8, h8
Knight - c1, a2, g2, d3, a4, d4, c5, d5, f5, h5, c6, g6, c7, c8
Pawn - g3, f6
King - b2, g4
- 5. Bishop - c2, c3, d3, e3, a4, c4, d4, e4, a5, e5, f6, c7, d7, d8
Rook - b2, c2, e2, f2, g2, h2, c3, d3, e3, f3, g3, h3, b4, c4, d4, e4, g4, h4, c5, e5, h5, d6, f6, g6, h6, b8, c8, d8, e8, f8, g8
Queen - b1, c1, d1, e1, f1, g1, h1, a2, b2, c2, e2, f2, g2, h2, c3, d3, e3, f3, g3, h3, a4, b4, c4, d4, e4, g4, h4, a5, c5, e5, h5, a6, d6, f6, g6, h6, b7, c7, d7, e7, f7, g7, h7, a8, b8, c8, d8, e8, f8, g8
Knight - c3, e3, f3, h3, b4, c4, d4, e4, a5, c5, d6, g6, a7, c7, e7, f7, g7, d8
Pawn - c4, e4
King - g4, a5, b7
- 6. Bishop - d1, b3, d3, h3, e4, g4, f5, c6, e6, g6, b7, d7, e7, g7, g8
Rook - a2, d2, e2, f2, h2, a3, c3, d3, g3, h3, c4, d4, f4, g4, h4, a5, c5, f5, g5, h5, a6, c6, d6, g6, h6, a7, c7, d7, f7, g7, b8, d8, e8, g8, h8

Queen - a1, d1, h1, a2, b2, d2, e2, f2, h2, a3, b3, c3, d3, g3, h3, b4, c4, d4, e4, f4, g4, h4, a5, b5, c5, e5, f5, g5, h5, a6, c6, d6, e6, g6, h6, a7, b7, c7, d7, e7, f7, g7, b8, d8, e8, g8, h8

Knight - e1, c3, e3, b4, d4, f4, h4, g5, b6, c7, d7, e7

Pawn - b7

King - g3, g6

7. 1.Nf6+

8. 1.Qa5

9. 1.Bf4

Page 90 - Fundamental Tactics: Discovered Attacks

1. 1.e7+

2. 1.f7+ or 1.f3+

3. 1.Nh5+

4. 1.dxe7#

5. 1.Bxh7+

6. 1.e5

7. The threatened discovered attack is for White to move 1.Nc5+, exposing the Queen to attack by the Rooks. Black could defend against this attack by moving the Queen off e6 or e8, e7 and e5 are okay because the Queen could then capture the White Knight when it moves to c5. Black would also avoid the discovery by moving the Queen off the e-file, maybe to h3, with check.

8. The threatened discovered attack is for White to move 1.Ne5+, exposing the e8-Rook to attack by the Bishop. Black could defend against this attack by moving the Rook anywhere along the back rank, perhaps to b8, attacking the undefended Bishop.

9. The threatened discovered attack is for White to move 1.fxg5, exposing the f8-Rook to capture by the Rook-Rook battery. Black can defend against this attack by pushing 1...g4, creating a second passed Pawn on the Queenside. If White pushes the issue with 2.f5 (again threatening the discovery), Black can escape the skewer with 2...Kg7. Now, the discovery holds no threat because it does not come with check, and Black simply gains the White Pawn. Black's outside passed Pawns will win the game with careful play by Black.

Page 92 - Fundamental Tactics: Removing the Defender

1. White will have to remove the g7-Bishop, White can do this by first moving 1.h6, attacking the Bishop and forcing it to abandon defense of the Knight or be lost

2. White will have to remove the b7-Pawn, White can do this by first moving 1.Nxb7 which also attacks the Rook if Black moves 1...Rb8 to attack the Knight, White can still capture 2.Bxc6 which will capture the piece and protect the White Knight (now on b7)

3. White will have to remove the g4-Knight, White can do this by first moving 1.Bxg4+

4. White would like to move 1.Bd5+, forking the King and Rook. White should first remove the defender of d5 by moving 1.Rxe7. White's extra Pawn will prove decisive.

5. White would like to move 1.Rd8#, delivering a back-rank mate. White should first remove the defender of the d8-square by moving 1.Qxb6.

6. White would like to move 1.Ne5+, forking the King and Queen. White should first remove the defender of the e5 square by moving 1.Bxg4.

7. 1.Rxe8 (removing the defender of the g7-square). If Black takes the Rook on e8, White can deliver checkmate with 2.Qxg7#. If Black instead defends against checkmate, White can retreat or defend the Rook, having gained a Knight in the process.

8. 1.Qxg6 (removing the defender of the h8-square). If Black takes the Queen on g6, White can skewer the Black King and Queen with 1.Rh8+, regaining the material he just sacrificed on g6. If Black guards against the skewer, White can then retreat the Queen, having gained a Knight in the process.

9. 1.Rxb5 (removing the defender of the d7-square). If Black captures the Knight with 1...Nxb5, White can fork the Black King and Queen with 2.Nd7+. If Black escapes the fork (perhaps 1...Kg8), White has simply won the Bishop and should go on to win the game.

Page 94 - Fundamental Tactics: Combining Tactics

1. 1.Qh4 (threatening mate on h7 and Bishop-takes-Rook) 1...Qh5 2.Bxb5 Qxh4 3.gxh4 axb5

2. 1.Rxh5 (Black cannot recapture hxg5 because of the fork: Qh3) 1...Re8, 2.Rg1

3. 1.Rc6+ (IF 1...Kxc6 then 2.Ndxe5+ fxe5 3.Nxe5+ Kd5 4.Nxf7) 1...Kd5 2.Rxa6 and White has won a Pawn.
4. 1.Ne4 (opening a discovery on the Black Queen and threatening a fork on f6) 1...Bb6 2.Qc3 Bxd4 3.Qxd4 0-0-0 4.Rxg6 Rxg6
5. 1.Nd6+ (double check on the King) 1...Kb8 2.Rxb7#
6. 1.Nf6+ Bxf6 (forced) 2. Qxg6 (exploiting the pinned f7-Pawn) Bg7 (forced) 3.Qh7#
7. 1.Nf6+ (forking King and Rook, forcing the King to move) Kh8 2.Nf7# (or Ng6#)
8. 1.Bh6 (attempting to remove the defender of the e7 square where White could fork the Black King and Queen - so Black cannot capture Nxh6) 1...Re8 (protecting the e7-square and escaping the threat), 2.Bg7 (attacking the trapped Rook) exd5 3.cxd5 Qc7 4.Bxh8
9. 1.Rxe7 (if 1...Nxe7 then 2.Qxd7+ Kxd7 3.Bf5+ Ke8 4.Bd7+ Kd8 5.fxe7#) Kd8 2.Rxd7+ Kc8 3.Rd8 Kxd8 4.Bf5+ Qxd1+ 5.Qxd1+

Page 103 - Fundamentals of Openings

Answers in this section may vary... There are always several different moves that are acceptable in openings. The answers given below are strong moves with some explanation. Your answers may be different, what's important is that you've selected moves based on the principles of openings. Chances are, if you follow principle, your move is probably good. Of course, after a little research you may find that your move steps into a tactical problem or isn't strong for long-term strategic reasons, but every player begins learning about openings by first making mistakes. Following the principles will help you develop a strong sense of openings while you move through a process of learning openings.

1. Nc3 is one strong option here because it develops another piece, blocks the e1-a5 diagonal preventing Black from checking the White King, and moves a Knight before a Bishop
2. Qc2 is one strong option here because it develops the Queen, defends the c4-Pawn, and prepares for development of the White Knight and Bishop as well as the development of a Rook to the soon-to-be half-open d-file
3. Be3 is one strong option here because it develops the Bishop, defends the Knight, and prepares to connect the Rooks. Be3 also prepares to develop the Queen to d2 where the Bishop and Queen will form a battery along the c1-h6 diagonal, possibly aiming to trade the dark-square Bishops.
4. 1.Bd3 is one strong option here because it develops the Bishop, prepares to castle, and prevents Black from moving Ne4 exploiting the pin on the White Knight.
1...d5 is one strong response to 1.Bd3 because it develops a Pawn to the center, attacks White's c4-Pawn, adds another attacker to the e4-square, and prepares development for the Black light-square Bishop.
5. *There are several strong options for White in this position...*
1.c3 is a strong option (and my personal favorite) in this position because it prepares for White to push d4. It also prepares for the light-square Bishop to move to c2 where it will work with the dark-square Bishop to control a large swath of space on the Kingside. At first glance, this move might appear to block in the dark-square Bishop and the Queenside Knight, but after d4 and the resulting exchanges, these pieces will be freed up to move into the action.
1...d5 is a strong response to 1.c3 because it immediately attacks White's center, preventing White from pushing d4 immediately. 1...d5 also prepares development for Black's light-square Bishop while attacking e4. Black's light-square Bishop can look to pin the f3-Knight from g4, and if White captures exd5, Black can follow with Nxd5, and the game is immediately active before White has a chance to develop his Queenside Knight and Bishop.
6. 1.Bh4 is a strong option in this position. It defends the Bishop and maintains the pin on the f6-Knight which means the Bishop stays active. Since all of White's minor pieces are developed, this means that maintaining the strength of the pieces should be good enough. Trading the Bishop for the Knight is also okay; trading is a committal move that permanently means White will be without a dark-square Bishop and be left with a single Bishop and two Knights versus Black's two Bishops and single Knight. This is why I prefer 1.Bh4 to trading.
1...Bg4 is a strong response to 1.Bh4. It attacks the f3-Knight by placing it in a pin, develops the light-square Bishop, and prepares to connect the Rooks. There are other possibilities, but I prefer Bg4 here because it continues to develop pieces and complicate the position. The more complicated the position, the stronger my opponent must be in order to meet my challenge. If I offer a trade (1...Be6, for examples), White can trade his bad Bishop for Black's good Bishop. The trade eliminates these two pieces, making the position slightly more simple and slightly more in White's favor. Another idea is to push 1...g5, attacking White's Bishop again; however, this opens up tactical possibilities for White since the Black King is now much more

exposed. Personally, I like to keep my King safe until later in the game; with so many pieces left on the board, it would be difficult to see my way through the tactical complications. These are the reasons I personally choose to simply follow principles and develop the light-square Bishop.

7. 1.Be3 is a strong option here because it develops the Bishop, attacks the b6-Knight, prepares to develop the Queen, and prepares to connect the Rooks. This developing move gives the dark-square Bishop strong mobility along two diagonals: c1-h6 and g1-a7. It also leaves open the possibility for the Queen to move to d2 or c1 and form a battery or for the Queen to develop to c2 or b3 where she will perform other tasks.
1...Be6 is a strong response to 1.Be3 because it develops the light-square Bishop, prepares for the Queen to develop, prepares to connect the Rooks, and prevents White from developing the Queen to b3.
8. 1.Nb3 is a strong option here because it develops the Knight to a stronger square, attacks Black's Bishop, defends the d4-square (making 3 defenders of that central square), and preparing to place a piece on the d4-square which can no longer be attacked by a Black Pawn. Noticing that d4 is now an outpost is critical in making the choice to move Nb3. Though the White Knight is moving a second time, Black is forced to defend the Bishop, so the tempo is regained. When moving Nb3 with tempo, White is also gaining the strength of the d4-square. In this case, breaking the principle of moving a piece twice is well worth it.
1...Bb6 or 1...Bd6 are both strong responses to 1.Nb3. Black must defend the Bishop, so retreating it to one of these two squares is ideal. Moving Bd6 places the Bishop on a strong diagonal aimed at the White King (attacking the King position) while preparing to make a battery with the Black Queen. Moving Bb6 maintains the position on the g1-a7 diagonal while preventing the White Knight from moving to a5. In fact, moving to b6 ensures that Black has some control over every forward square for White's c3-Knight. Bb6 also has the added benefit of watching over the d4-square; Bd6 admits defeat on that square, conceding it to White while making a strategic decision to pursue White along other lines. Bd6 assumes that Black can attack White in ways that render the d4-post relatively weak since Black can just work around it.
9. 1.Bb5+ is a strong option for White here. White has succeeded in getting more of his pieces developed more quickly than Black, and White can keep the initiative by playing actively. Checking the Black King ignores the threat on White's c3-Pawn for the moment in favor of forcing Black to respond to the tempo-gaining Bb5+. This is a common idea in openings, a player who gains an advantage in development can best capitalize on this advantage by playing actively.
Black cannot defend with 1...Nc6 because White can continue with the tactical sacrifice: 2.Nxc6 bxc6 3.Bxc6+, forking the Black King and Rook.
If Black defends with 1...Bd7, White can keep up the pressure by taking on f6 (2.Bxf6), Black must respond with 2...gxf6 (otherwise he loses material), then White can defend the light-square Bishop with 3.Qb3, thus adding a second defender to the Bishop which is currently attacked twice. This ensures that if Black captures with Bxb5, White can recapture Nxb5, threatening a fork (Nc7) which forces Black to defend the c7-square. By taking on f6, White has succeeded in affecting the Black Pawn structure, ensuring that the Black King cannot castle safely in either direction (since the Queenside is already wide open).
If Black defends with 1...Nbd7, White can continue 2.Bxf6 again aiming to affect Black's Pawn structure. Then, Black can try to grab the initiative with 2...Qxc3+ which forces White to move 3.Kf1, and Black has succeeded in eliminating White's chances of castling. After capturing 3...gxf6, Black's castling doesn't look so good either, but Black has succeeded in sticking White with the same problem.
This final opening position is rather complicated, but it shows very well how tempo and initiative come into play in the openings, something that newer players tend to forget or ignore. Again, following the principles can help any player wade their way through any opening, no matter how complex it might appear at first glance.