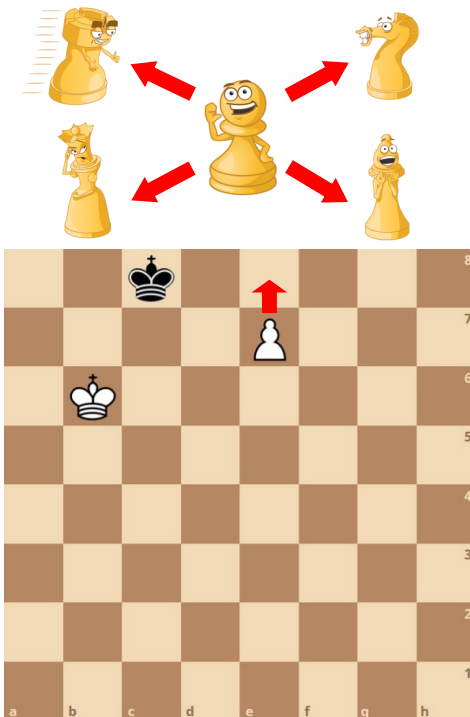


Lesson 8: Pawn Promotion and Chess Maths



Pawn Promotion

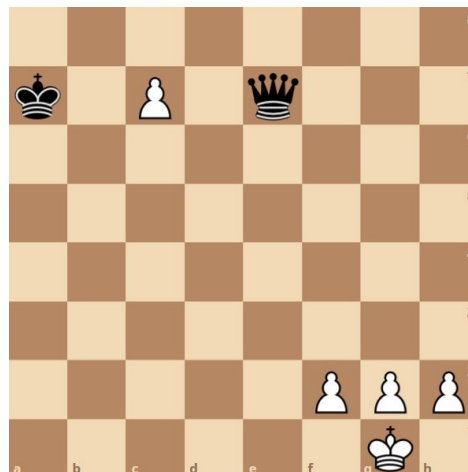
Way back in Lesson 1 we played a game called Capture the Flag. To win that game you needed to be first to get a pawn to the far side of the board. But we now know that to win a real game of chess you need to get CHECKMATE. So what does happen if a pawn reaches the 8th rank?

When a pawn reaches the far side of the board it is PROMOTED. It becomes a new queen, rook, knight, or bishop. Which one will you choose?

Did you know?

In a game between two Spanish chess masters in 2011, both players promoted two pawns each. At one stage there were six queens on the board! Can you work out the largest number of queens White can have?

Grandmaster Test



Can you find the winning move for White? Watch out for Black's sneaky check-mate trap.

Answer with Lesson 9.



Under-promotion

Most of the time players choose a new queen when they promote a pawn. The queen is the strongest piece on the board. However, sometimes it makes sense to UNDER-PROMOTE to a different piece. Does that help with the Grandmaster Test?

On the left is another under-promotion. Can you see why Black chose a new rook rather than a queen?

Value of the Pieces

If we want to work out who is in the lead during a game of chess, one idea is to add up the value of each side's army:

- Queen—9 points
- Rook—5 points
- Bishop—3 points
- Knight—3 points
- Pawn—1 point

Good Move or Bad Move?

We can use the values of the pieces to help us decide whether a move is good or bad. Which move should White choose here?

A) Bishop takes pawn (Black will recapture with the rook)

B) Bishop takes rook (Black will recapture with the king)

With one move White gains two points, the other she loses two points.



But what about the king?

Why didn't we give a value to the king? You can't take a king in chess. If he's attacked he's in **CHECK** and you have to rescue him. If you can't get out of **CHECK** it is **CHECKMATE** and the game ends. The king is priceless. He is worth the whole game.



Chess Maths

In the equations below, use the values of the pieces to work out which army is stronger. Then complete the chess sum by putting one of these mathematical symbols into each box: $>$, $<$, or $=$.

<u>White</u>		<u>Black</u>
Bishop + Knight	<input type="text"/>	Rook
Queen + pawn	<input type="text"/>	Rook + Bishop + Knight
Rook + Bishop + Knight + pawn	<input type="text"/>	Queen + Knight
Rook + Bishop + Pawn	<input type="text"/>	Queen

Try keeping a score of the points while you play. But remember, it doesn't matter how many points you are ahead if you get checkmated—you still lose!

Can you make up your own Chess Maths problems and test your own family? Can you work out how many points you have at the start of the game?