



Finding a Turning Point by Completing the Square



REVISE THIS TOPIC

CHECK YOUR ANSWERS

- 1 The equation of a curve is $y = x^2 + 2x + 7$
By completing the square, work out the coordinates of the turning point.
You **must** show your working. [3 marks]

Answer (_____ , _____)

- 2 The equation of a curve is $y = x^2 + 6x + 13$
By completing the square, work out the coordinates of the turning point.
You **must** show your working. [3 marks]

Answer (_____ , _____)

- 3 The equation of a curve is $y = x^2 - 10x + 29$
By completing the square, work out the coordinates of the turning point.
You **must** show your working. [3 marks]

Answer (_____ , _____)





- 4 The equation of a curve is $y = x^2 - 2x - 7$
By completing the square, work out the coordinates of the turning point.
You **must** show your working. [3 marks]

Answer (_____ , _____)

- 5 The equation of a curve is $y = x^2 + 12x + 40$
By completing the square, work out the coordinates of the turning point.
You **must** show your working. [3 marks]

Answer (_____ , _____)

- 6 The equation of a curve is $y = x^2 - 3x + 4$
By completing the square, work out the coordinates of the turning point.
You **must** show your working. [3 marks]

Answer (_____ , _____)

- 7 The equation of a curve is $y = x^2 - 5x - 9$
By completing the square, work out the coordinates of the turning point.
You **must** show your working. [3 marks]

Answer (_____ , _____)





- 8 A curve with equation $y = x^2 + bx + c$ has a turning point at the point (4, -2)
Work out the value of b and c . [3 marks]

$b =$ _____ $c =$ _____

- 9 A curve with equation $y = x^2 + bx + c$ has a turning point at the point (-4, 9)
Work out the value of b and c . [3 marks]

$b =$ _____ $c =$ _____

- 10 A curve with equation $y = x^2 + bx + c$ has a turning point at the point (-3, -3)
Work out the value of b and c . [3 marks]

$b =$ _____ $c =$ _____

