Finding a Turning Point by Completing the Square

SCAN ME

REVISE THIS TOPIC

CHECK YOUR ANSWERS

SCAN ME

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

Answer (_____ , _____)

9

4 The equation of a curve is $y = x^2 - 2x - 7$

By completing the square, working 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, working 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, working 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, working out the coordinates of the turning point.

You **must** show your working. **[3 marks]**

Answer (_____ , _____)

Solutions

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]**

$b =$ _____ $c =$ _____

21

Solutions