

Completing the Square

Question Paper

Course	Edexcel IGCSE Maths
Section	2. Equations, Formulae & Identities
Topic	Completing the Square
Difficulty	Medium

Time allowed: 30
Score: /25
Percentage: /100

Question 1

Write $x^2 + 6x - 7$ in the form $(x + a)^2 + b$ where a and b are integers.

[2 marks]

Question 2

Write $x^2 + 2x - 8$ in the form $(x + m)^2 + n$

where m and n are integers.

[2 marks]

Question 3

Express $x^2 - 10x + 40$ in the form $(x + a)^2 + b$, where a and b are integers.

[2 marks]

Question 4

The equation of a curve is $y = (x + 3)^2 + 5$

Circle the coordinates of the turning point.

(5, 3)

(5, -3)

(3, 5)

(-3, 5)

[1 mark]

Question 5

Write $x^2 - 10x + 22$ in the form $(x - a)^2 - b$

[3 marks]

Question 6

Write $x^2 - 6x + 11$ in the form $(x - a)^2 + b$

[3 marks]

Question 7

Write $x^2 + 8x + 3$ in the form $(x + a)^2 - b$.

[4 marks]

Question 8

Write $x^2 - 10x + 16$ in the form $(x + a)^2 + b$

[3 marks]

Question 9

Write $x^2 + 10x + 14$ in the form $(x + a)^2 + b$.

[2 marks]

Question 10

$$x^2 + 4x - 9 = (x + a)^2 + b$$

Find the value of a and the value of b .

$a = \dots\dots\dots$

$b = \dots\dots\dots$

[3 marks]