



ACHIEVE ACADEMY

GCSE Maths — Foundation Tier

Solving Quadratic Equations · Practice Booklet

NAME: _____

CLASS: _____

DATE: _____

☐ Developing

☒ Secure

☐ Greater Depth

Answer every question in the working space provided. Method marks are available for correct working even if the final answer is wrong. Check the time allowed with your tutor before you start.

Solving Quadratic Equations

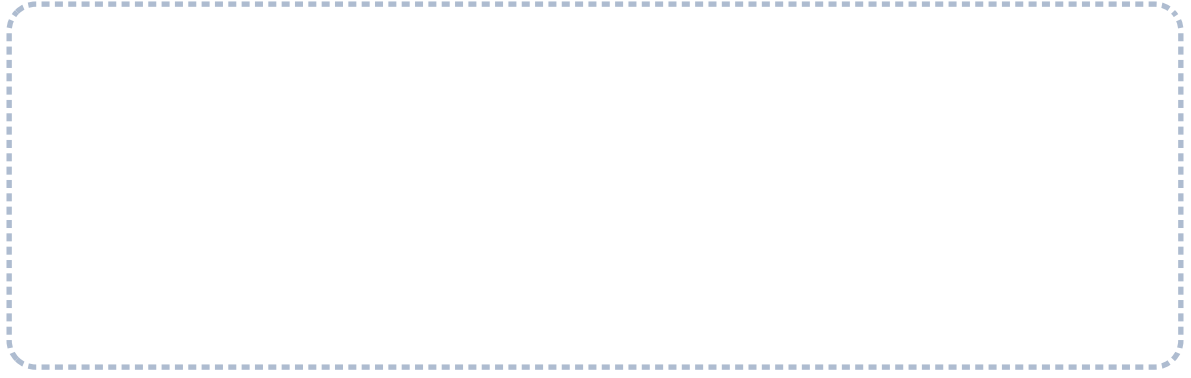
Total marks available: 86

● Solving Quadratic Equations

Q1

[3 marks]

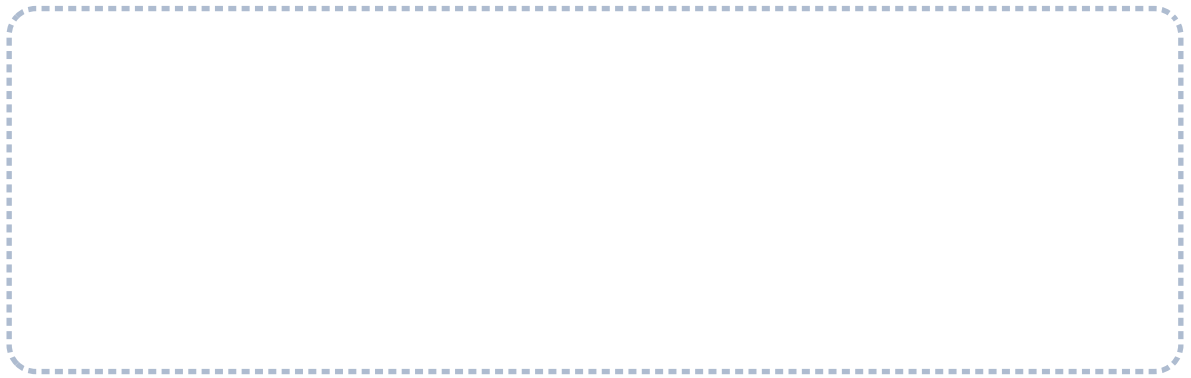
Solve $x^2 - 8 = 56$.



Q2

[2 marks]

Solve $a^2 = 9$.



Q3

[2 marks]

Solve $y^2 = 121$.

Q4

[2 marks]

Solve $b^2 = 36$.

Q5

[3 marks]

Solve $n^2 + 2 = 27$.

Q6

[3 marks]

Solve $b^2 + 4 = 20$.

Q7

[2 marks]

Solve $x^2 = 100$.

Q8

[2 marks]

Solve $b^2 = 25$.

Q9

[3 marks]

Solve $n^2 + 7 = 32$.

Q10

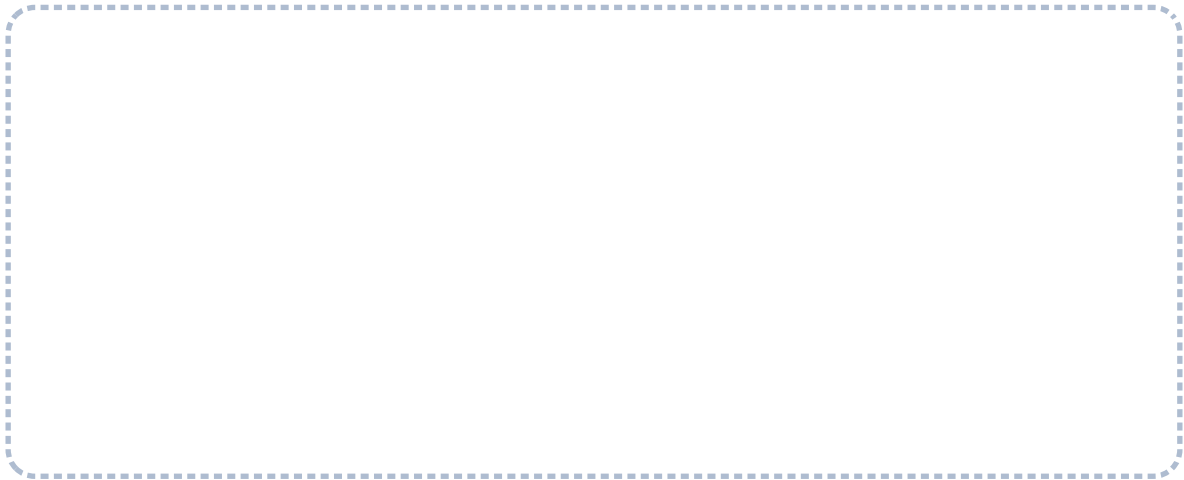
[3 marks]

Solve $b^2 + 9 = 34$.

Q11

[3 marks]

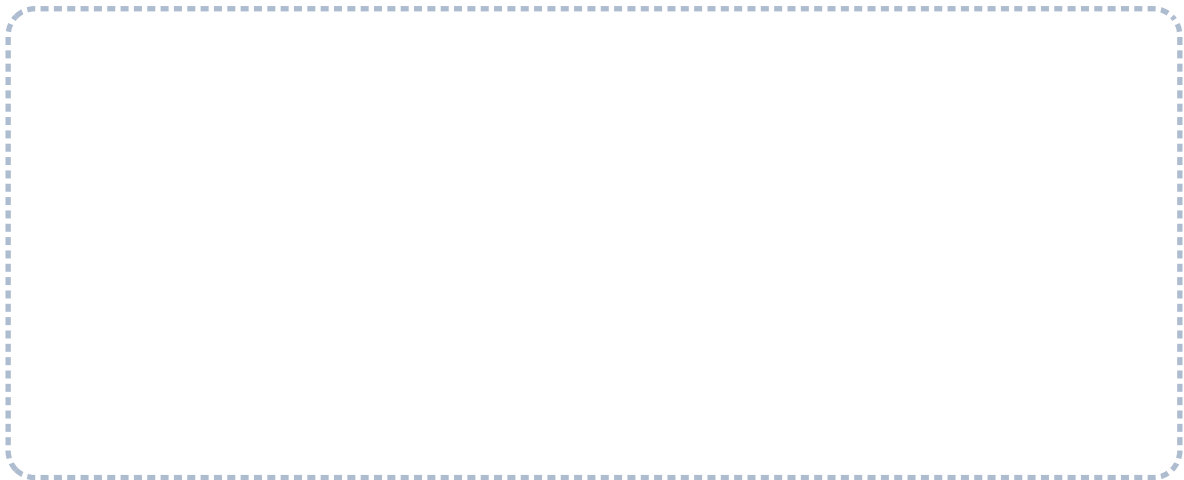
Solve $y^2 - 11y + 30 = 0$.



Q12

[3 marks]

Solve $b^2 - 11b + 24 = 0$.



Q13

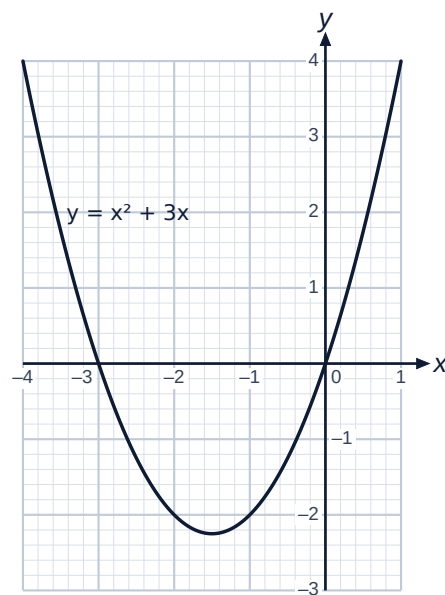
[3 marks]

Solve $a^2 - 4a = 0$.

Q14

[2 marks]

The graph of $y = x^2 + 3x$ is drawn on the grid.
Use the graph to solve $x^2 + 3x = 0$.



Q15

[3 marks]

Solve $y^2 - 9y + 18 = 0$.

Q16

[3 marks]

Solve $b^2 - 15b + 56 = 0$.

Q17

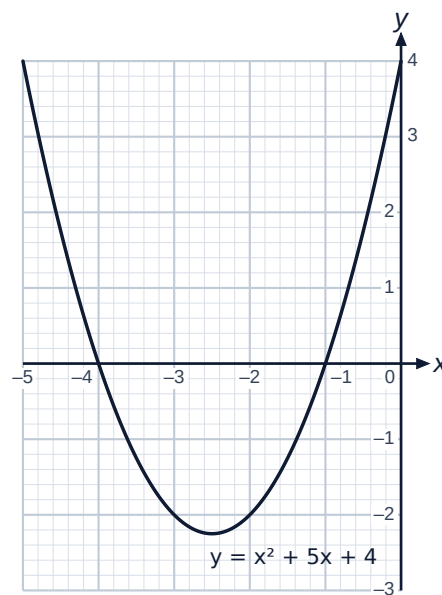
[3 marks]

Solve $a^2 + 3a = 0$.

Q18

[2 marks]

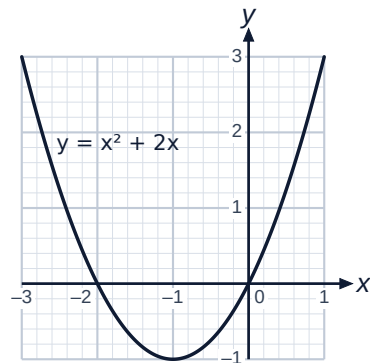
The graph of $y = x^2 + 5x + 4$ is drawn on the grid.
Use the graph to solve $x^2 + 5x + 4 = 0$.



Q19

[2 marks]

The graph of $y = x^2 + 2x$ is drawn on the grid.
Use the graph to solve $x^2 + 2x = 0$.



Q20

[3 marks]

Solve $y^2 + 12y = 0$.

Q21

[4 marks]

Solve $x^2 + 10x + 16 = 0$.

Q22

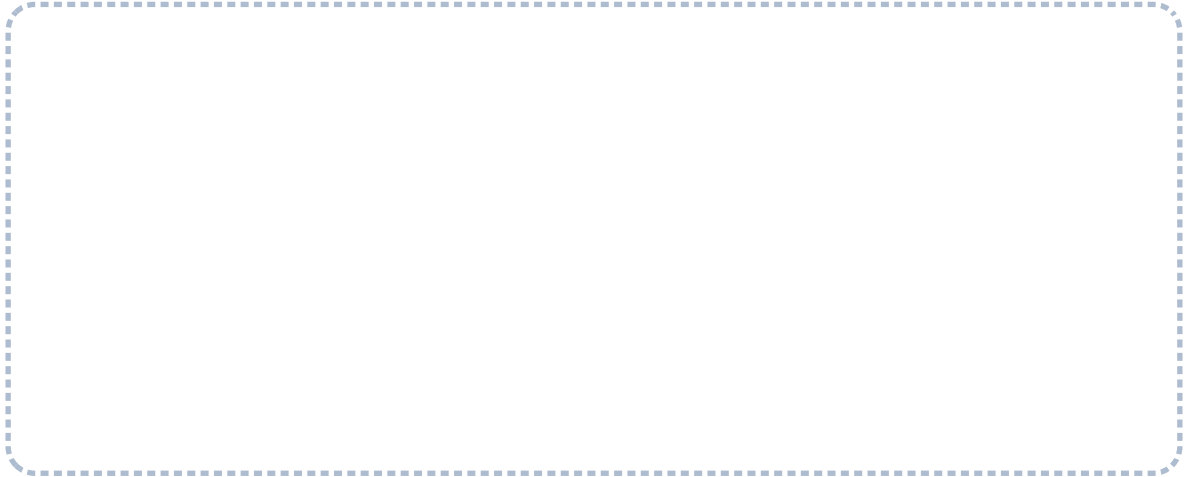
[4 marks]

Solve $a^2 + 8a + 15 = 0$.

Q23

[3 marks]

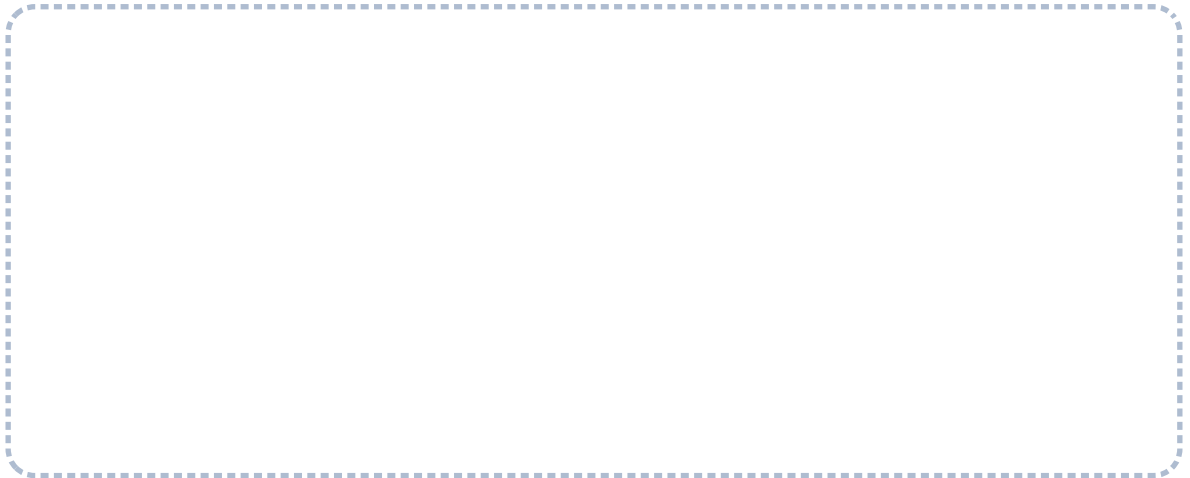
Solve $n^2 - 3n - 10 = 0$.



Q24

[3 marks]

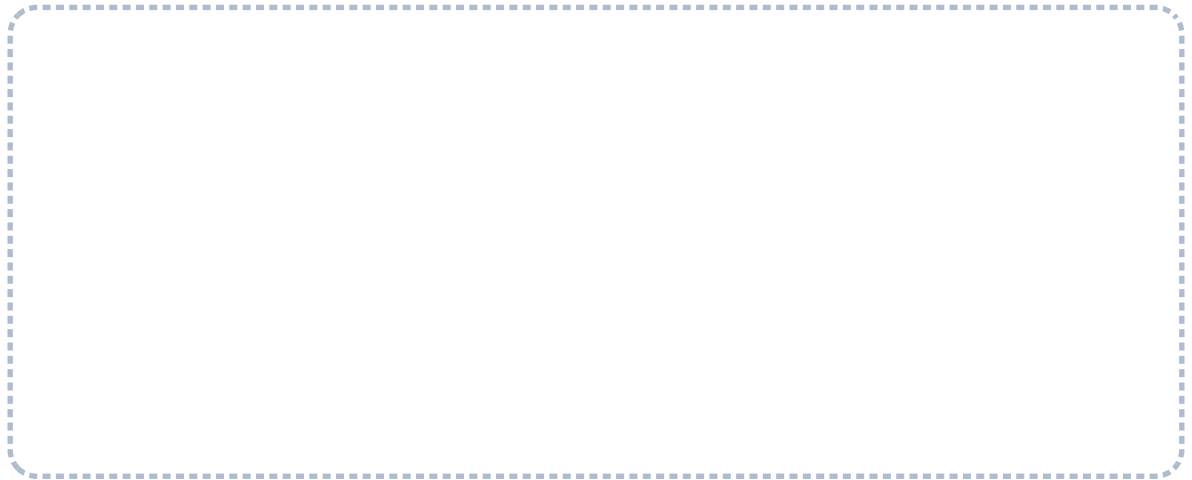
Solve $n^2 - n - 72 = 0$.



Q25

[4 marks]

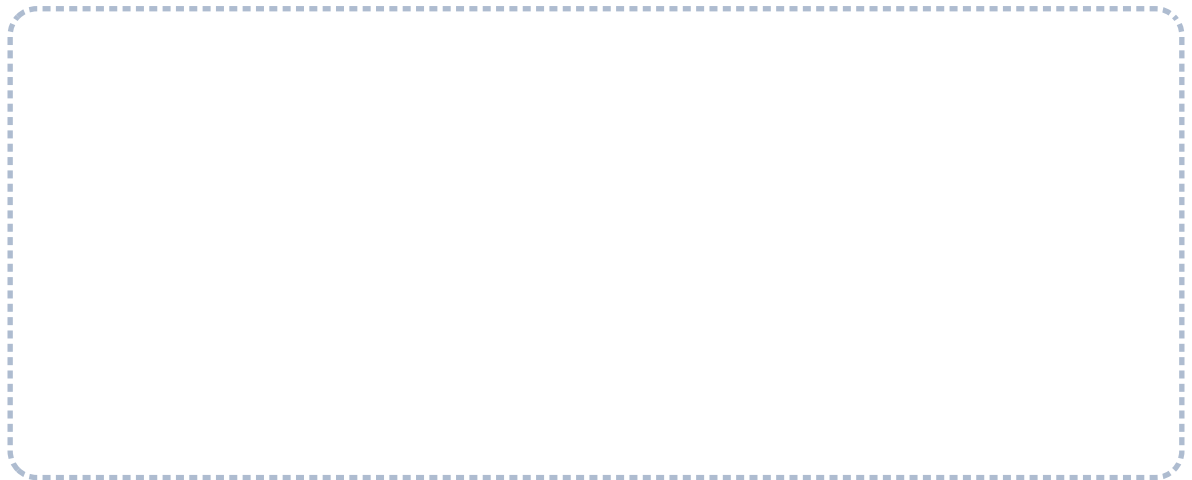
Solve $n^2 + 7n + 12 = 0$.



Q26

[3 marks]

Solve $a^2 - 2a - 35 = 0$.



Q27

[3 marks]

Solve $n^2 + 5n - 24 = 0$.

Q28

[4 marks]

Solve $a^2 + 9a + 14 = 0$.

Q29

[3 marks]

Solve $a^2 + 3a - 54 = 0$.

Q30

[3 marks]

Solve $n^2 + 4n - 5 = 0$.