



THIRD SPACE
LEARNING

GCSE Exam Questions

Solving Quadratic Equations |
Algebra

GCSE Exam Questions: Solving Quadratic Equations

1) (a) Factorise $x^2 + x - 42$.

(2)

(b) Hence solve $x^2 + x - 42 = 0$.

(2)
(4 marks)

2) Solve $p^2 + 9p + 14 = 0$

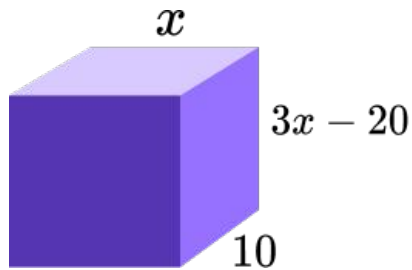
(2 marks)

GCSE Exam Questions: Solving Quadratic Equations

- 3) Solve $h^2 + 9h + 2 = 8h + 58$

(3 marks)

- 4) Below is a cuboid.
The volume of the cuboid is 1000cm^3



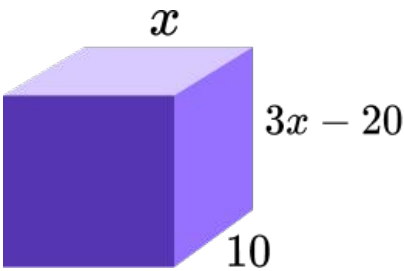
- (a) Show that $3x^2 - 20x - 100 = 0$.

(3 marks)

- (b) Solve $3x^2 - 20x - 100 = 0$ to find x , the length of the cuboid.

(3)
(6 marks)

GCSE Exam Questions: Solving Quadratic Equations Answers

	Question	Answer	Marks
1) (a)	Factorise $x^2 + x - 42$.	(a) $(x \pm 6)(x \pm 7)$ $(x + 7)(x - 6)$	(1) (1)
(b)	Hence solve $x^2 + x - 42 = 0$.	(b) $x = -7$ $x = 6$	(1) (1)
2)	Solve $p^2 + 9p + 14 = 0$	$(p + 2)(p + 7)$ $p = -2, p = -7$	(1) (1)
3)	Solve $h^2 + 9h + 2 = 8h + 58$	$h^2 + h - 56 = 0$ $(h + 8)(h - 7)$ $h = -8, h = 7$	(1) (1) (1)
4)	Below is a cuboid. The volume of the cuboid is 1000cm^3 .		
			
(a)	Show that $3x^2 - 20x - 100 = 0$.	(a) $10x(3x - 20) = 1000$ $30x^2 - 200x - 1000 = 0$ $3x^2 - 20x - 100 = 0$	(1) (1) (1)
(b)	Solve $3x^2 - 20x - 100 = 0$. To find x , the length of the cuboid.	(b) $(3x \pm 10)(3x \pm 10) = 0$ $(3x + 10)(3x - 10) = 0$ $x = 10$ Note: $x = \frac{-10}{3}$ is not a reasonable solution for a dimension.	(1) (1) (1)

Where to go next?

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