THIRD SPACE LEARNING

GCSE Exam Questions

Solving Equations | Algebra

GCSE Exam Questions: Solving Equations

1) **(a)** Solve: $4y = 36$

(1)

(b) Solve: $x^2 - 5x - 24 = 0$.

Give your answer(s) to 3 significant figures.

(3)

(4 marks)

2) **(a)** Solve: $7y - 8 = 13$

(2)

(b) Solve: $2x^2 - 5x - 2 = 0$

(3)

(5 marks)

3) **(a)** Solve: $4(3 - x) = 32$

(2)

(b) Write $x^2 - 6x + 1$ in the form $a(x + b)^2 + c$ where a, b, and c are integers.

(3)

(c) Hence or otherwise, solve $x^2 - 6x + 1 = 0$.

Give exact answers.

(2)

(7 marks)

GCSE Exam Questions: Solving Equations Answers

	Question	Answer	Marks
1) (a)	Solve: $4y = 36$	$y = 9$	**(1)**
(b)	Solve: $x^2 - 5x - 24 = 0$	$(x \pm 8)(x \pm 3) = 0$ *Their* $x = \pm 8$ and $x = \pm 3$ $x = -3$, $x = 8$	**(1)** **(1)** **(1)**
2) (a)	Solve: $7y - 8 = 13$	$7y = 21$ $y = 3$	**(1)** **(1)**
(b)	Solve: $2x^2 - 5x - 2 = 0$. Give your answer(s) to 3 significant figures	Correct use of the quadratic formula $x = 2.85$ $x = -0.351$	**(1)** **(1)** **(1)**
3) (a)	Solve: $4(3 - x) = 32$	$12 - 4x = 32$ or $3 - x = 8$ $x = -5$	**(1)** **(1)**
(b)	Write $x^2 - 6x + 1$ in the form $a(x + b)^2 + c$ where a, b, and c are integers.	$(x - 3)^2 - 9 + 1$ $(x - 3)^2 - 8$ $a = 1$, $b = -3$, and $c = -8$	**(1)** **(1)** **(1)**
(c)	Hence or otherwise, solve $x^2 - 6x + 1 = 0$. Give exact answers.	$x = 3 + 2\sqrt{2}$ $x = 3 - 2\sqrt{2}$	**(1)** **(1)**

Where to go next?

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