



THIRD SPACE
LEARNING

GCSE Exam Questions

Quadratic Inequalities | Algebra

GCSE Exam Questions: Quadratic Inequalities

- 1) (a) Find the interval for which $x^2 + 13x + 36 < 0$

(3)

- (b) Solve $x^2 - 13x + 40 \leq 0$

(3)
(6 marks)

- 2) (a) Solve $2x^2 - 8x + 7 \leq 0$

(3)

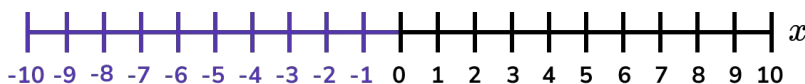
- (b) List the integer values that satisfy part (a).

(1)
(4 marks)

- 3) (a) Solve $(x + 4)(x - 1) \geq (x + 1)^2$

(3)

- (b) Represent the solution which satisfies part (a) on the number line



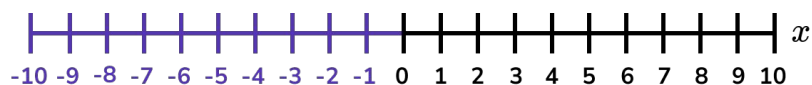
(2)
(5 marks)

GCSE Exam Questions: Quadratic Inequalities

1) (a) Solve $x^2 - 3x \geq 10$


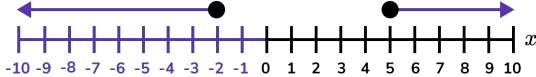
(3)

(b) Represent your solution to part (a) on the number line



(2)
(5 marks)

GCSE Exam Questions: Quadratic Inequalities Answers

	Question	Answer	Marks
1) (a)	Find the interval for which $x^2 + 13x + 36 < 0$	(a) $(x + 4)(x + 9)$ - 4 and - 9 $- 9 < x < - 4$	(1) (1) (1)
(b)	Solve $x^2 - 13x + 40 \leq 0$	(b) $(x - 8)(x - 5)$ 5 and 8 $5 \leq x \leq 8$	(1) (1) (1)
2) (a)	Solve $2x^2 - 8x + 7 \leq 0$	(a) $x = \frac{-(-8) \pm \sqrt{(-8)^2 - 4 \times 2 \times 7}}{2 \times 2}$ 1.292... and 2.707... $1.292... \leq x \leq 2.707...$	(1) (1) (1)
(b)	List the integer values that satisfy part (a).	(b) 2	(1)
3) (a)	Solve $(x + 4)(x - 1) \geq (x + 1)^2$	(a) $x^2 + 2x + 1$ $x^2 + 3x - 4$ $x \geq 5$	(1) (1) (1)
(b)	Represent the solution which satisfies part (a) on the number line	(b) '5' indicated Closed circle with line to the right 	(1) (1)
4) (a)	Solve $x^2 - 3x \geq 10$	(a) $(x - 5)(x + 2)$ 5 and - 2 $x \leq -2$ and $x \geq 5$	(1) (1) (1)
(b)	Represent your solution to part (a) on the number line	(b) - 2 and 5 indicated Closed circles with two lines 	(1) (1)

Where to go next?

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