GCSE Exam Questions

Solving Inequalities | Algebra
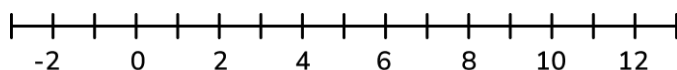
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GCSE Exam Questions: Solving Inequalities

1) **(a)** Solve the inequality $2x + 11 \leq 6x - 23$

(2)

(b) Show the solution on a number line.

(2)

(4 marks)

2) **(a)** Solve the inequality:

$$4 < x + 2 \leq 9$$

(2)

(b) List the prime numbers that satisfy the inequality.

(2)

(4 marks)

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GCSE Exam Questions: Solving Inequalities

3) **(a)** Write an inequality that satisfies the number line below:

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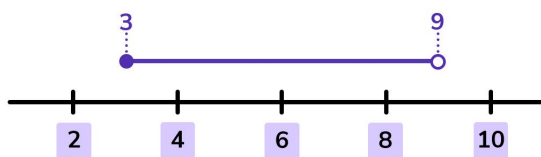
(2)

(b) List the integer values that satisfy the inequality.

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(1)

(3 marks)

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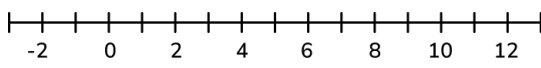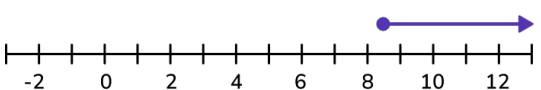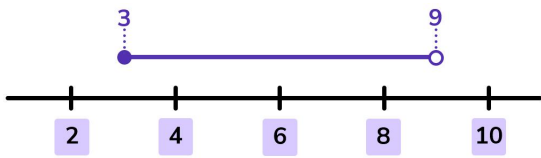
4) **(a)** Solve the inequality $3\left(x + 5\right) \leq 18$

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(2)

(b) What is the greatest integer that satisfies the inequality?

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(1)

(3 marks)

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GCSE Exam Questions: Solving Inequalities Answers

		Question	Answer	Marks
1) (a)		Solve the inequality $2x + 11 \leq 6x - 23$	**(a)** $6x - 2x(= 4x)$ **or** $11 + 23(= 34)$ **or** $2x - 6x(= -4x)$ **or** $-23 - 11(= -34)$ $x \geq 8.5$ **oe**	**(1)** **(1)**
	(b)	Show the solution on a number line. 	**(b)** For closed circle above 8.5 For arrow in the correct direction	**(1)** **(1)**
2) (a)		Solve the inequality $4 < x + 2 \leq 9$	**(a)** $4 - 2 < x \leq 9 - 2$ $2 < x \leq 7$	**(1)** **(1)**
	(b)	List the prime numbers that satisfy the inequality.	**(b)** For identifying the integers 3, 4, 5, 6, 7 For identifying correctly the prime numbers 3, 5, 7	**(1)** **(1)**
3) (a)		Write an inequality that satisfies the number line below: 	**(a)** $3 < x < 9$ $3 \leq x < 9$	**(1)** **(1)**
	(b)	List the integer values that satisfy the inequality.	**(b)** 3, 4, 5, 6, 7, 8	**(1)**
4) (a)		Solve the inequality $$3(x + 5) \leq 18$$	**(a)** $3x + 15 \leq 18$ **or** $x + 5 \leq 6$ $x \leq 1$	**(1)** **(1)**
	(b)	What is the greatest integer that satisfies the inequality?	**(b)** 1	**(1)**

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