

Solving Linear Inequalities

For AQA GCSE Mathematics (8300) • Foundation tier

Name _____

Total marks: **28**

Answer **all** questions in the spaces provided. Show your working: marks are given for correct method.

1 (a) Solve $x + 5 > 9$

[1 mark]

Answer _____

(b) Solve $3x \leq 21$

[1 mark]

Answer _____

(c) Solve $\frac{x}{2} < 6$

[1 mark]

Answer _____

2 Solve $3x - 4 \leq 11$

[2 marks]

Answer _____

3 Solve $5x + 2 > 17$

[2 marks]

Answer _____

4 Solve $2x - 7 < 3$
Circle your answer.

[1 mark]

$x < -2$

$x < 2$

$x < 5$

$x > 5$

5 Solve $6x + 7 > 2x - 5$

[2 marks]

Answer _____

6 Solve $4(x - 3) \geq 2x + 6$

[3 marks]

Answer _____

7 (a) Solve $6x - 5 < 19$

[2 marks]

Answer _____

(b) Write down the largest integer that satisfies $6x - 5 < 19$

[1 mark]

Answer _____

8 n is an integer.
List all the values of n that satisfy $7 < 2n + 1 \leq 15$

[2 marks]

Answer _____

9 Solve $4y + 13 \geq 6$

[2 marks]

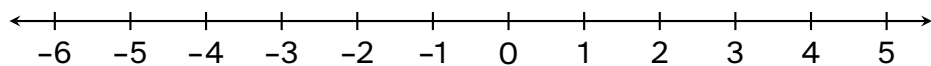
Answer _____

10 (a) Solve $-3 < x + 2 \leq 5$

[2 marks]

Answer _____

(b) Show your answer to part (a) on the number line.



[2 marks]

11 Sara solves $2x + 3 \geq 9$

$$2x \geq 12$$

$$x \geq 6$$

What mistake has Sara made?

[1 mark]

12 A rectangle has length $(x + 8)$ cm and width x cm.

The perimeter of the rectangle must be less than 50 cm.

Work out the range of possible values of x .

[3 marks]

Answer _____