

GCSE MATHEMATICS

Topic tests - Higher tier - Algebra

Name _____



1 (a) Solve $5(x - 2) = 35$

[3 marks]

$x =$ _____

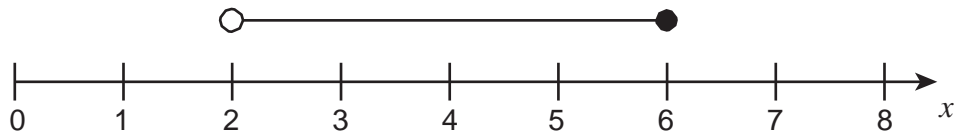
1 (b) Solve $9y + 1 = 6y + 13$

[3 marks]

$y =$ _____

2 (a) Circle the inequality shown by the diagram.

[1 mark]



$2 < x < 6$

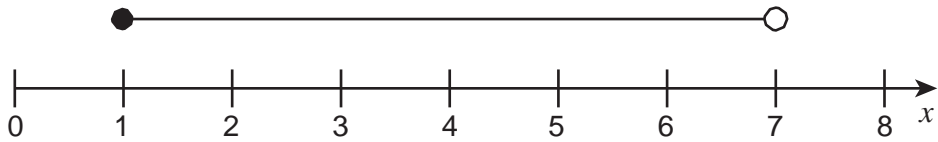
$2 \leq x < 6$

$2 < x \leq 6$

$2 \leq x \leq 6$

2 (b) Write down the integer values satisfied by this diagram.

[2 marks]



Answer _____

3 A straight line passes through the points $(-2, 0)$ and $(0, 6)$.

Work out the equation of the line.

[3 marks]

Answer _____

4 Factorise $x^2 + 9x + 14$

[2 marks]

Answer _____

5 Rearrange $4(2x + y) = 11 + 7y$ to make x the subject.

[3 marks]

Answer _____

6 Solve the simultaneous equations

$$\begin{aligned}2x + 4y &= 1 \\3x - 5y &= 7\end{aligned}$$

Do **not** use trial and improvement.

You **must** show your working.

[4 marks]

$x =$ _____

$y =$ _____

7 $(ax + b)(bx + a) \equiv 10x^2 + cx + 10$ where a and b are positive integers.

Find the **two** possible values of c .

[4 marks]

Answer _____ or _____

END OF QUESTIONS