

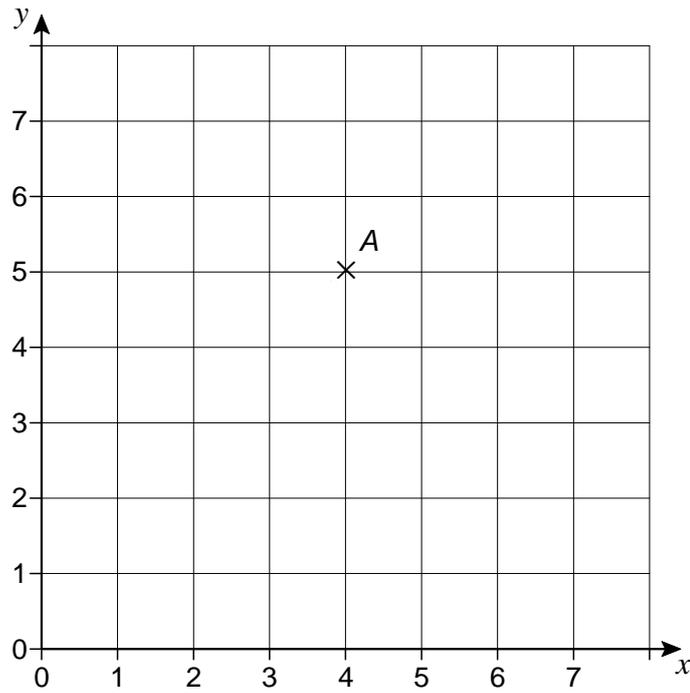
# GCSE MATHEMATICS

Topic tests - Foundation tier- Algebra

Name \_\_\_\_\_



1



1 (a) Write down the coordinates of *A*.

[1 mark]

Answer ( \_\_\_\_\_, \_\_\_\_\_ )

1 (b) Plot the point (2, 0).

Label this point *B*.

[1 mark]

1 (c) The coordinates of *C* add up to 6

Plot a possible position for *C*.

[1 mark]

2 (a) Simplify  $4w + 2w - w$

[1 mark]

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Answer \_\_\_\_\_

2 (b) Solve  $x - 5 = 4$

[1 mark]

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$x =$  \_\_\_\_\_

2 (c) Solve  $3y + 2 = 11$

[2 marks]

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$y =$  \_\_\_\_\_

3 (a) Expand  $3(x - 6)$

[1 mark]

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Answer \_\_\_\_\_

3 (b) Factorise  $5y - 10$

[1 mark]

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Answer \_\_\_\_\_

3 (c) Expand and simplify  $3(4w + 1) - 5(3w - 2)$

[3 marks]

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Answer \_\_\_\_\_

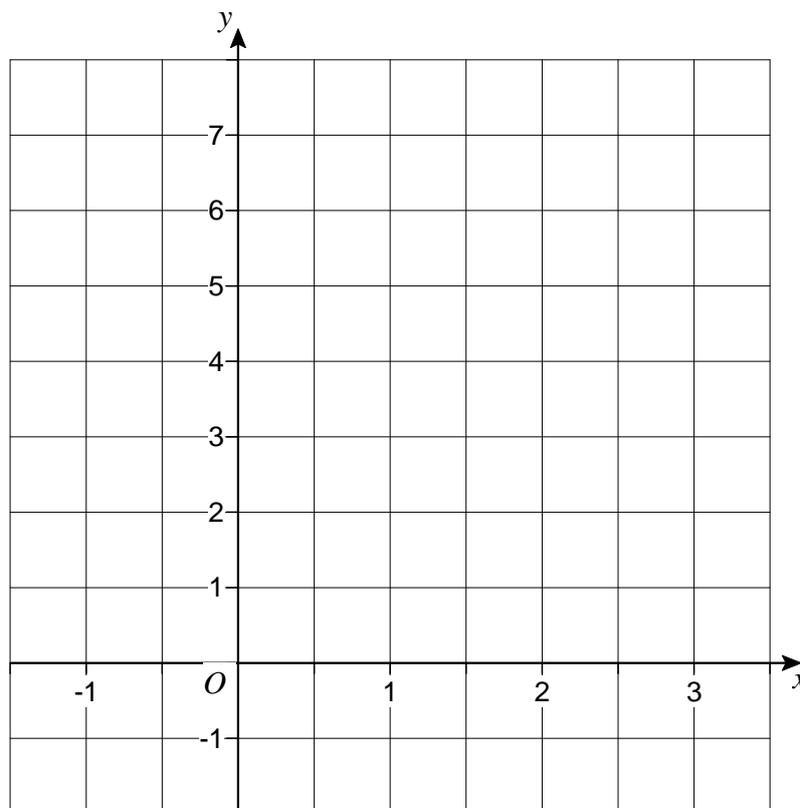
4 (a) Complete the table of values for  $y = 2x + 1$

[1 mark]

$x$	-1	1	3
$y$	-1		

4 (b) On the grid draw the graph of  $y = 2x + 1$  for values of  $x$  from -1 to 3

[2 marks]



- 5 A, B, C and D represent different numbers.  
The total for each row is shown.

				<b>Total</b>
A	A	A	A	24
A	A	B	B	22
A	B	B	C	26
A	B	C	D	28

Work out the values of A, B, C and D.

**[4 marks]**

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A = \_\_\_\_\_

B = \_\_\_\_\_

C = \_\_\_\_\_

D = \_\_\_\_\_

- 6 Each mark on the number line represents a number.  
The numbers are equally spaced.



Work out the value of  $a$ .

**[3 marks]**

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$a =$  \_\_\_\_\_

7  $x = 5$  is the solution to the equation  $a(x - 3) = 4x - b$

$a$  and  $b$  are integers.

Work out **two** possible pairs of values for  $a$  and  $b$ .

**[3 marks]**

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$a =$  \_\_\_\_\_  $b =$  \_\_\_\_\_

$a =$  \_\_\_\_\_  $b =$  \_\_\_\_\_

**END OF QUESTIONS**