

## Topic Test 2 (20 minutes)

### Graphs recap and extension - Foundation

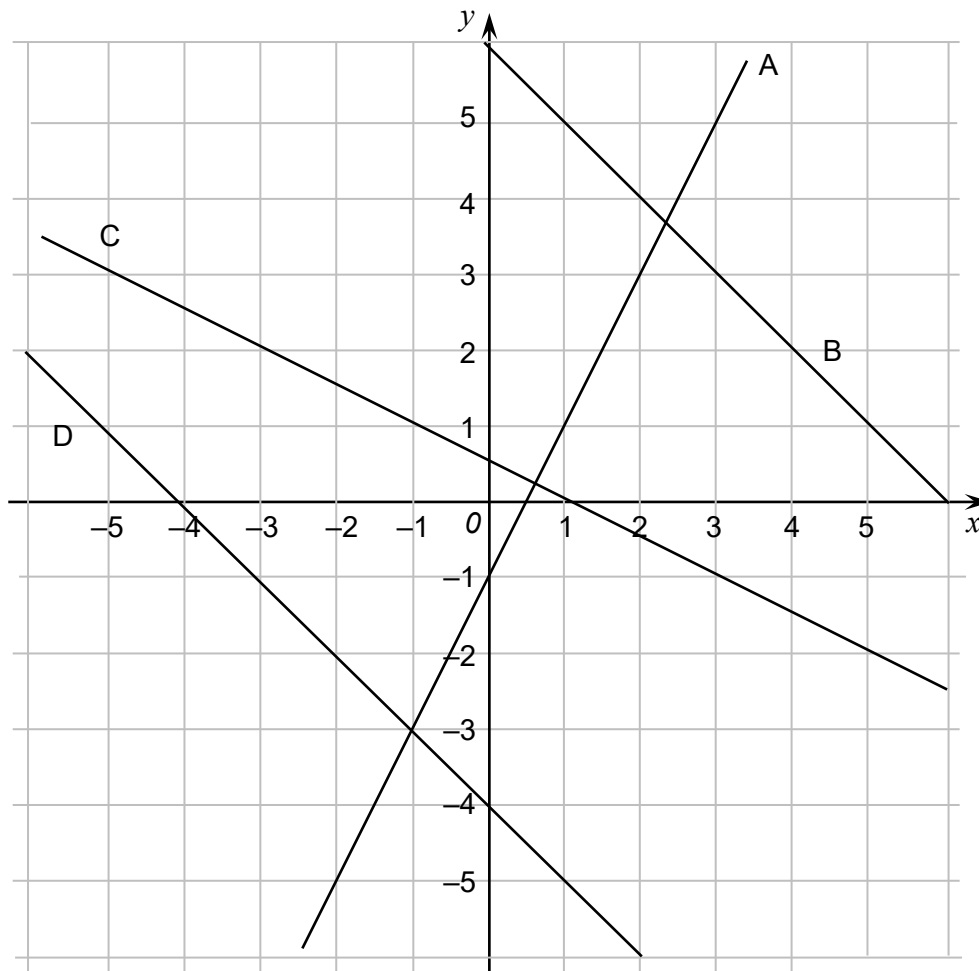
Here are four graphs.

Graph A:  $y = 2x - 1$

Graph B:  $x + y = 6$

Graph C:  $2y + x = 1$

Graph D:  $x + y + 4 = 0$



These graphs will help you to answer questions 1 to 5

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1 Which two graphs are parallel?

[1 mark]

Answer \_\_\_\_\_ , \_\_\_\_\_

2 Which two graphs are perpendicular?

[1 mark]

Answer \_\_\_\_\_ , \_\_\_\_\_

3 Which of the following points does graph B **not** pass through?  
Circle your answer.

[1 mark]

(0, 6)

(-3, 9)

(3, -3)

$(-\frac{1}{2}, 6\frac{1}{2})$

4 Write down the solution of the simultaneous equations

$$2x - y = 1$$

$$x + y = -4$$

[1 mark]

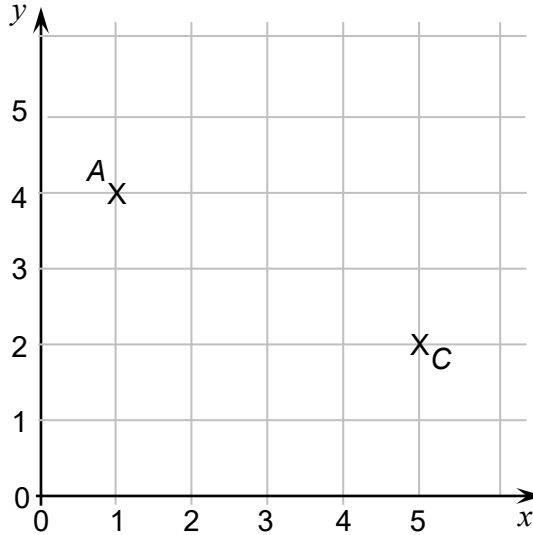
Answer ( \_\_\_\_\_ , \_\_\_\_\_ )

5 Work out the  $y$ -coordinate of the point on line C with an  $x$ -coordinate of 10

[1 mark]

Answer \_\_\_\_\_

- 6 Points  $A$  and  $C$  are drawn on the centimetre grid.  
 $A$  and  $C$  are **opposite** corners of a square,  $ABCD$ .



Work out the area of the square.  
 You **must** show your working, which may be on the diagram.

[3 marks]

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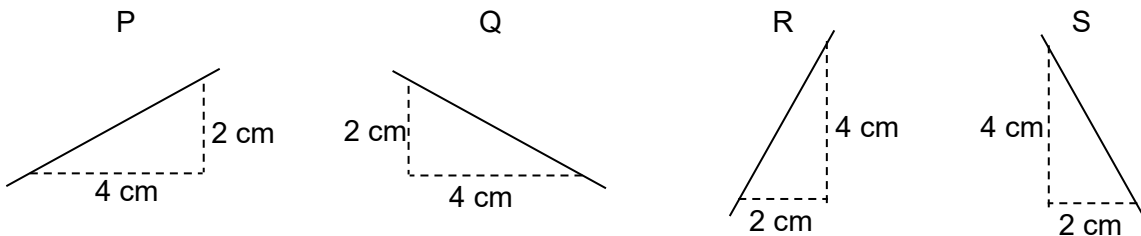
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Answer \_\_\_\_\_  $\text{cm}^2$

- 7 Here are 4 lines.

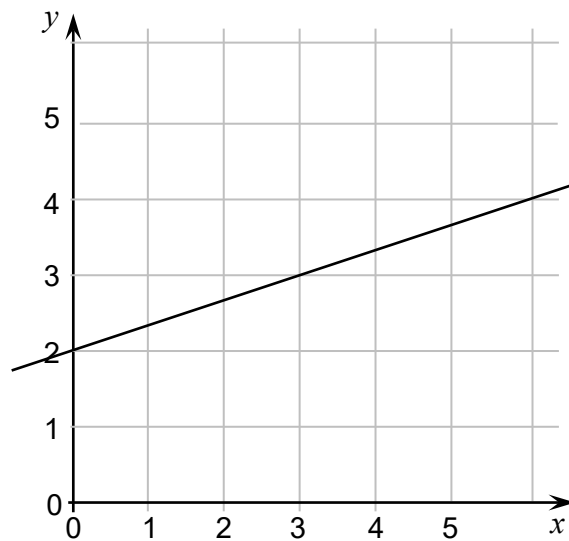


Which of the lines has a gradient of  $-2$ ?  
 Circle your answer.

[1 mark]

P                      Q                      R                      S

8 Here is a line.



8 (a) Work out the gradient of the line.

[2 marks]

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Answer \_\_\_\_\_

8 (b) Write down the equation of the line.

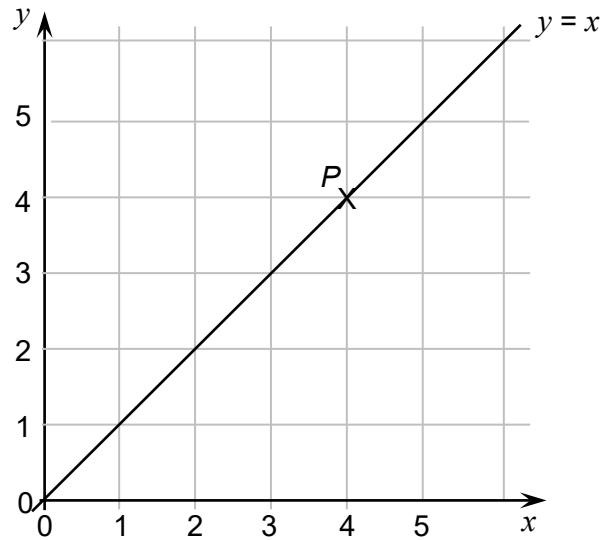
Give your answer in the form  $y = mx + c$

[1 mark]

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Answer \_\_\_\_\_

9 The graph of  $y = x$  is shown.



Work out the equation of the line that

- is perpendicular to  $y = x$
- passes through the point  $P(4, 4)$

[2 marks]

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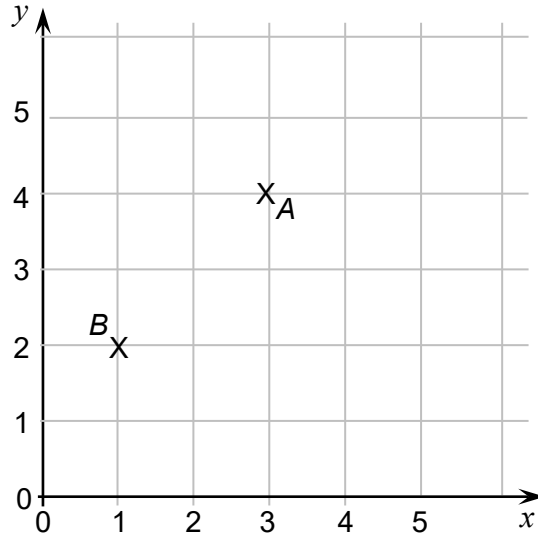
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Answer \_\_\_\_\_

10

$A(3, 4)$  and  $B(1, 2)$  are shown on the grid.



Work out the equation of the line that passes through  $A$  and  $B$ .

Give your answer in the form  $y = mx + c$

[3 marks]

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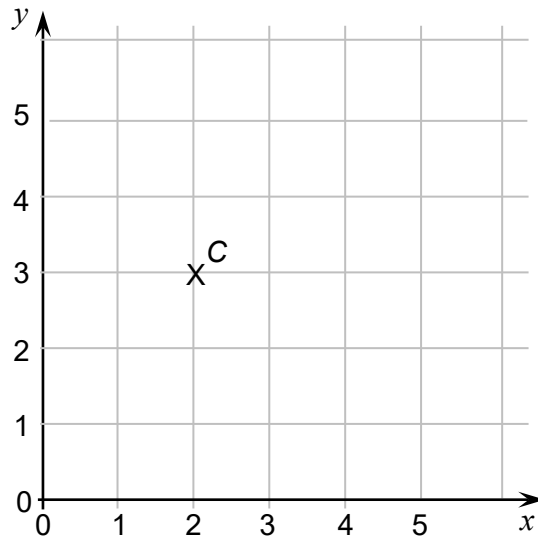
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Answer \_\_\_\_\_

11  $C(2, 3)$  is shown on the grid.



Work out the equation of the line that passes through  $C$  with a gradient of  $-3$

[3 marks]

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Answer \_\_\_\_\_