Equations of lines parallel to the axis

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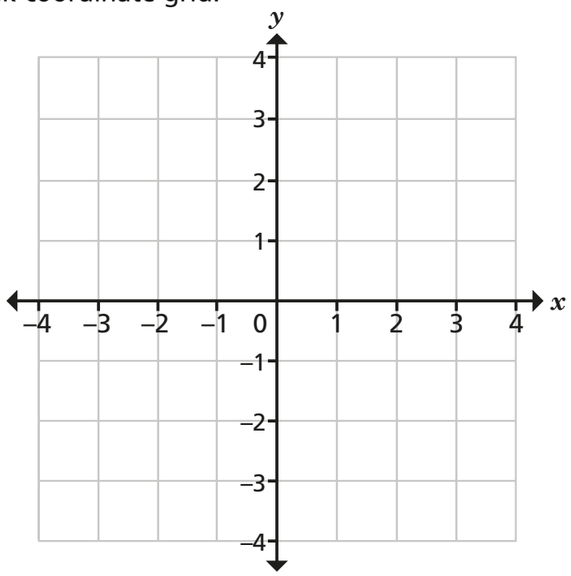
1 Which statement is correct? Tick your answer.

The x-axis and y-axis are perpendicular to each other. ☐

The x-axis and y-axis are parallel to each other. ☐

2 Here is a blank coordinate grid.



a) Plot these points and join them with a straight line.

(2, –3), (0, –3), (–1, –3), (–3.5, –3)

b) Complete the sentences.

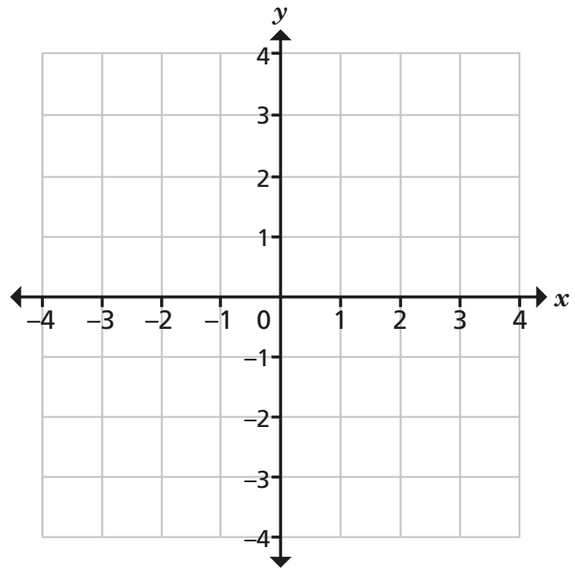
All of the y-coordinates are ☐

They join to form the line y = ☐

c) Write the coordinates of three points that lie on the line $y = 8$

_____

3 Here is a blank coordinate grid.



a) Draw the line $x = 2$ on the grid.

b) Write the coordinates of three points that lie on your line.

_____

How do these tell you that your line is correct?

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c) Write the coordinates of a point on the line $x = 2$ that you cannot see on the grid. (☐ , ☐)

d) Draw the line $y = 1$ on the same grid.

e) Write the coordinates of the point where the lines $x = 2$ and $y = 1$ intersect. (☐ , ☐)

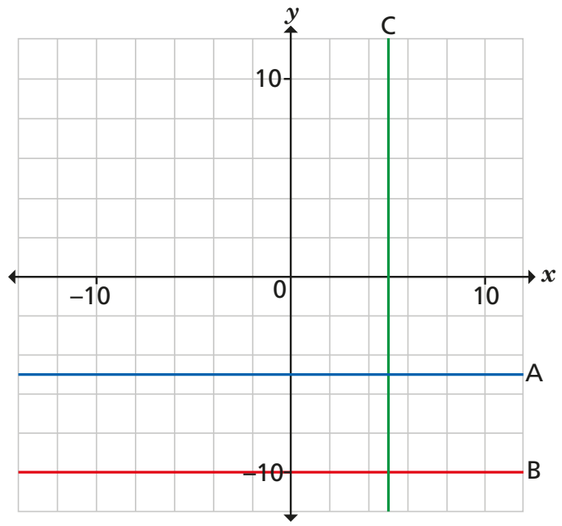
4 The point (–5, 9) lies on which of these lines? Tick your answers.

$y = -5$ ☐ $x = -5$ ☐ $x = 9$ ☐ $y = 9$ ☐

5 Which of these lines are parallel to the x-axis? Tick your answers.

$x = 0$ ☐ $6 = y$ ☐ $6y = 2$ ☐ $3y + 8 = 0$ ☐

6 The graph shows three straight lines: A, B and C.



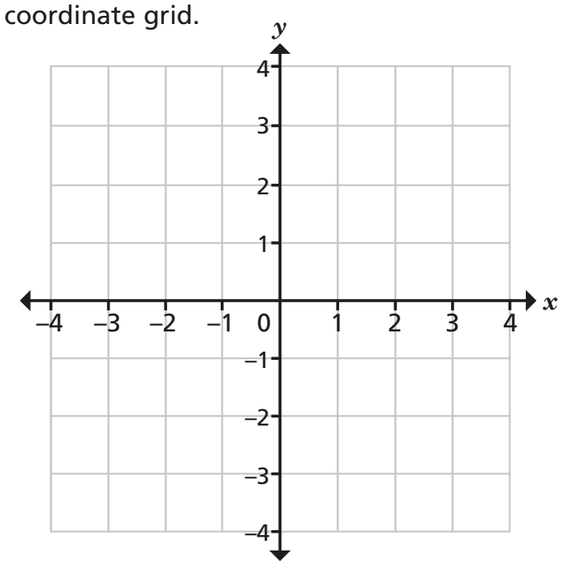
a) Which two lines are parallel to each other? _____ and _____

b) Which line is parallel to the y-axis? _____

c) What is the equation of line A? _____

d) What is the equation of line C? _____

7 Here is a blank coordinate grid.



Four vertices of a rectangle are given by the coordinates (2, –3), (4, –3), (2, 1) and (4, 1).

Write the equations for the two lines of symmetry of the rectangle.

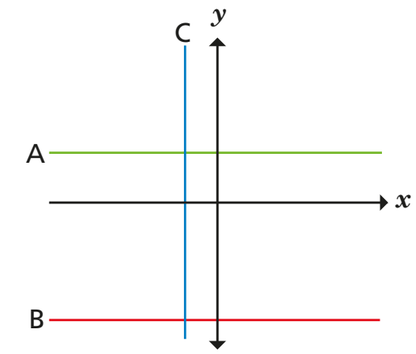
_____ and _____

8 Which of these lines does the point (13, –5) lie on? Tick your answers.

$y = 13$ ☐	$x = 13$ ☐	$y = -5$ ☐	$x = -5$ ☐
$y + 2 = -5 + 2$ ☐	$x - 13 = 0$ ☐	$y + 7 = 20$ ☐	$y + 5 = 0$ ☐

Compare answers with a partner.

9 The graph shows three lines: A, B and C.



a) Line A passes through the point (42, 11).

What is the equation of line A?

_____

b) Line C passes through the point $(-\frac{3}{2}, -51)$.

What is the equation of line C?

_____

c) Lines B and C intercept at the point $(p, -14)$.

What is the value of p? ☐

d) A fourth line, D, is drawn such that the region enclosed by all four lines is a square.

What is the equation of line D? _____