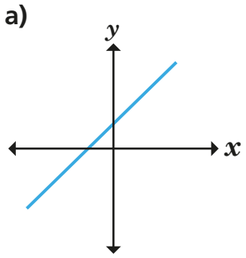
Find the equation of a straight line from a graph (1)

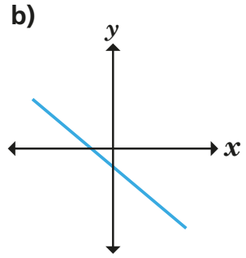
R

1 Are the y-intercepts of the lines positive or negative?

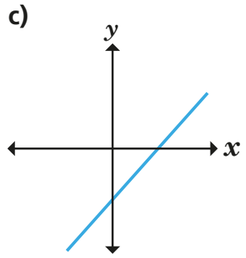
a)



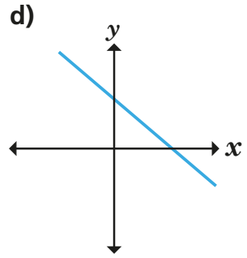
b)



c)



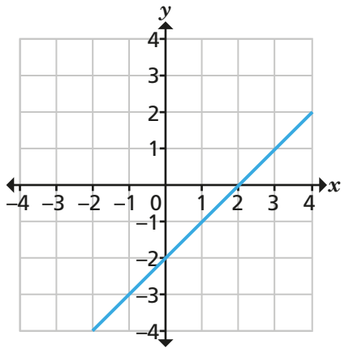
d)



How do you know?

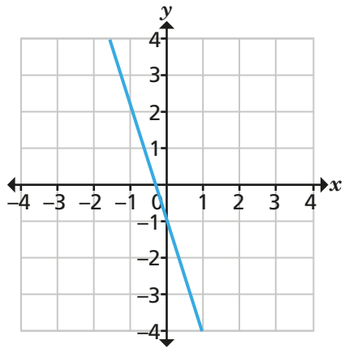
2 What are the y-intercepts of the lines?

a)



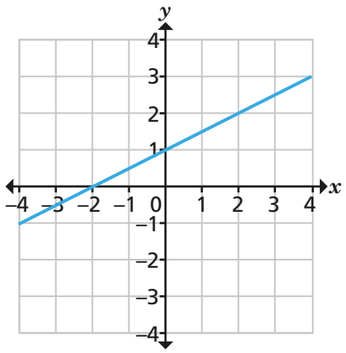
$c =$ ☐

c)



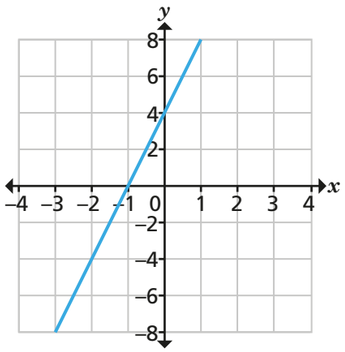
$c =$ ☐

b)



$c =$ ☐

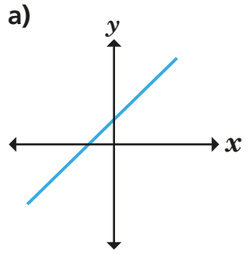
d)



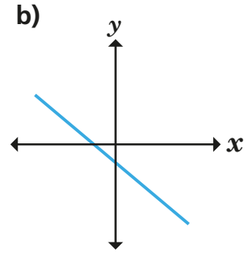
$c =$ ☐

3 Are the gradients of the lines positive or negative?

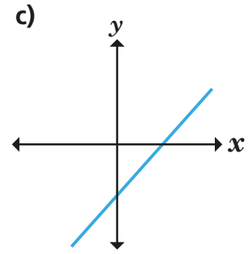
a)



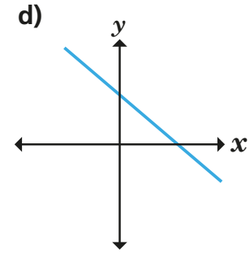
b)



c)



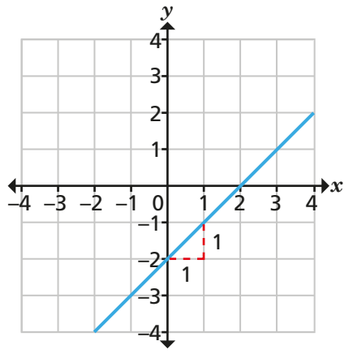
d)



How do you know?

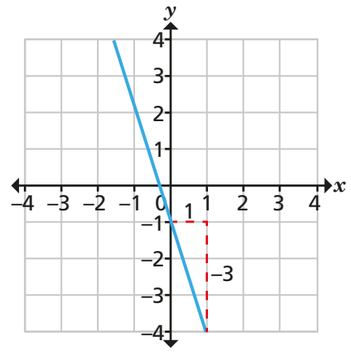
4 What are the gradients of the lines? The first one has been done for you.

a)



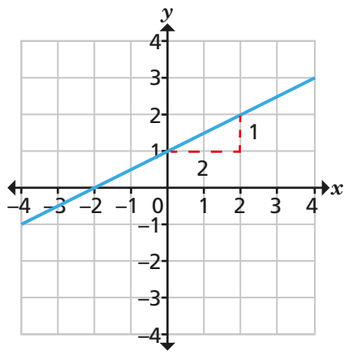
$m = \frac{\text{change in } y}{\text{change in } x} = \frac{1}{1} = 1$

c)



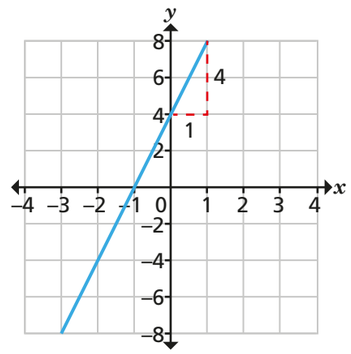
$m = \frac{\text{change in } y}{\text{change in } x} = \frac{\square}{\square} = \square$

b)



$m = \frac{\text{change in } y}{\text{change in } x} = \frac{1}{\square} = \square$

d)

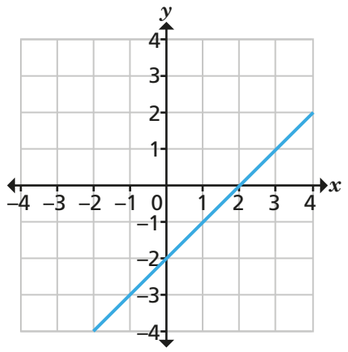


$m = \frac{\text{change in } y}{\text{change in } x} = \frac{\square}{\square} = \square$

5 What are the equations of the lines? Give your answers in the form $y = mx + c$.

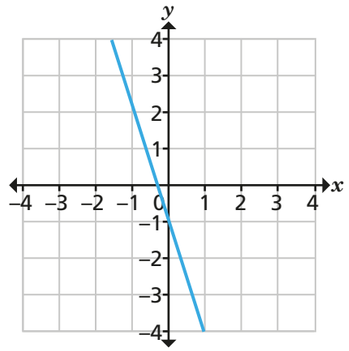
Use your answers to questions 2 and 4 to help you.

a)



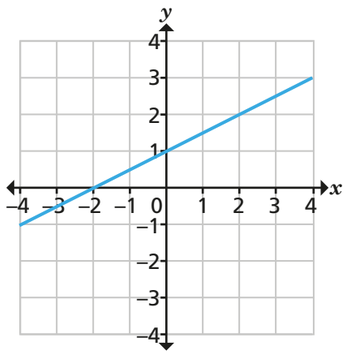
_____

c)



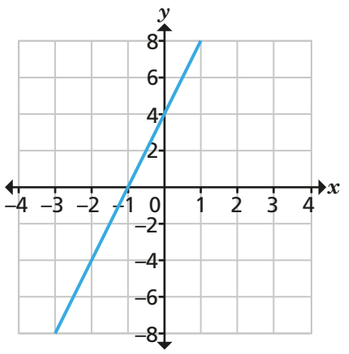
_____

b)



_____

d)



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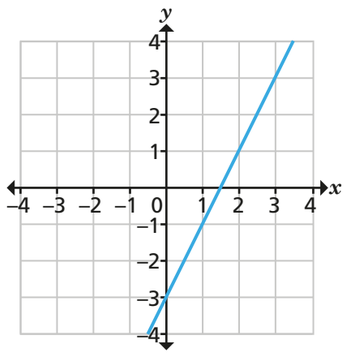
6 Work out the equations of the lines. Give your answers in the form $y = mx + c$.

a)



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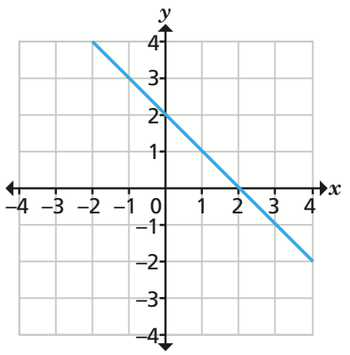
b)



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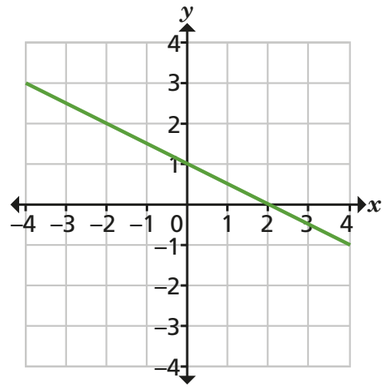
7 The graph shows a straight line, L_1.



a) What is the equation of L_1?

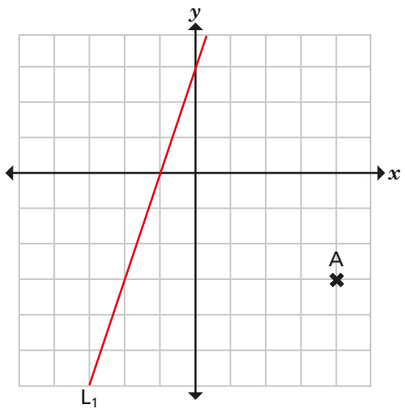
_____

b) A second line, L_2, is parallel to L_1 and passes through the point (0, –3).

Draw L_2 on the graph.

c) What is the equation of L_2? _____

8 The graph shows a straight line, L_1.



The coordinates of point A are (4, –6).

What is the equation of L_1?

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