

How to Represent Linear Functions

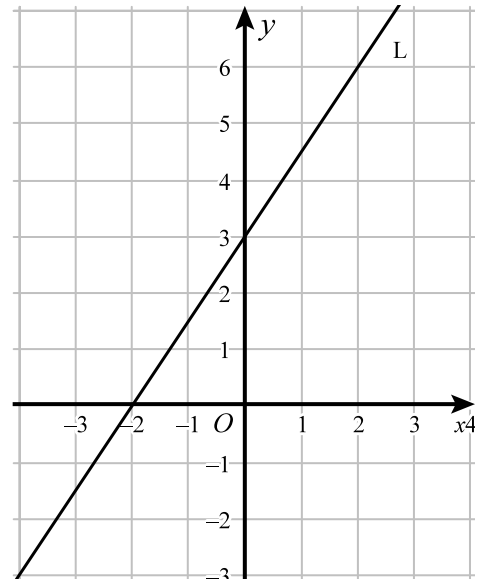
1 Here is a straight line L drawn on a grid.

Find an equation for L .

Give the equation in the form of $y = mx + c$

$m =$ _____

$c =$ _____

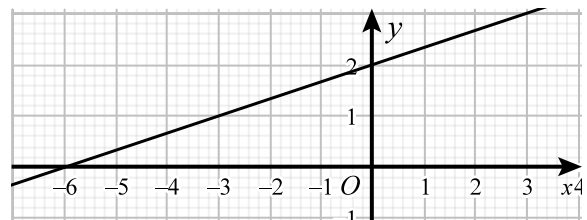


2 Determine the equation of the line shown below.

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

$m =$ _____

$c =$ _____



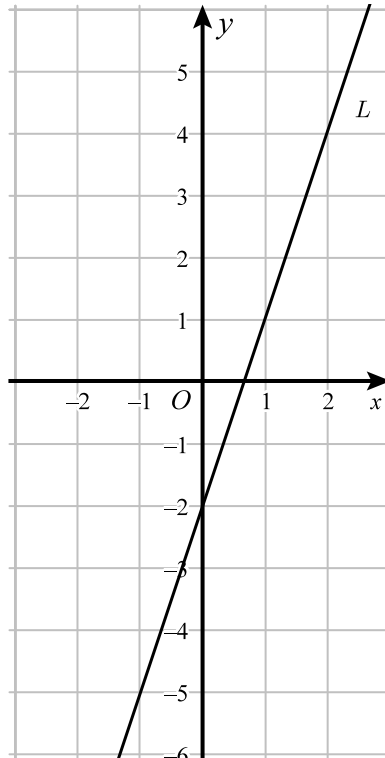
3 The line L is shown on the grid.

Find an equation for L .

Give the equation in the form of $y = mx + c$

$m =$ _____

$c =$ _____



4 Given that the slope of the line is -3 and its y -intercept is 4 , write the function of it in slope-intercept form.

- 5 Given that the slope of the line is -2 and it passes through point $(1, 1)$, write the equation of it in point-slope form.

- 6 Given that the slope of the line is -5 and its y -intercept is 1 , write the equation of it in slope-intercept form.

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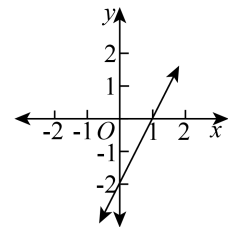
Given that the slope of the line is -3 and it passes through point $(1, 2)$, write the equation of it in point-slope form.

8

Given that the slope of the line is -2 and it passes through point $(1, 1)$, write the equation of it in point-slope form.

- 9 Given that the slope of the line is **2** and it passes through the point $(-4, -9)$, write down the equation of line l_1 in point-slope form.

- 10 The graph of the line is shown below, write the equation of it in slope-intercept form.



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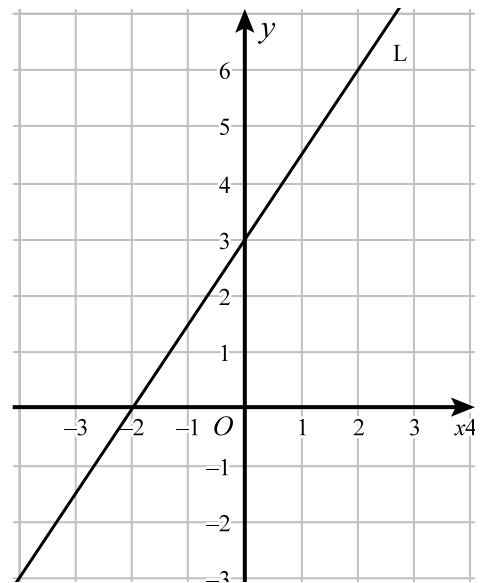
1 Here is a straight line L drawn on a grid.

Find an equation for L .

Give the equation in the form of $y = mx + c$

$m =$ _____

$c =$ _____



Answer 1:1.5

Alternative 1: $\frac{3}{2}$

Alternative 2: $\frac{3}{2}$

Alternative 3: $1\frac{1}{2}$

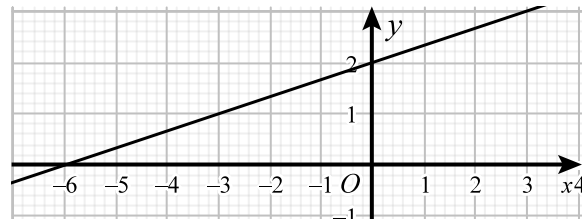
2:3

2 Determine the equation of the line shown below.

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

$m =$ _____

$c =$ _____



Answer 1: $\frac{1}{3}$
2: 2

Solution N/A

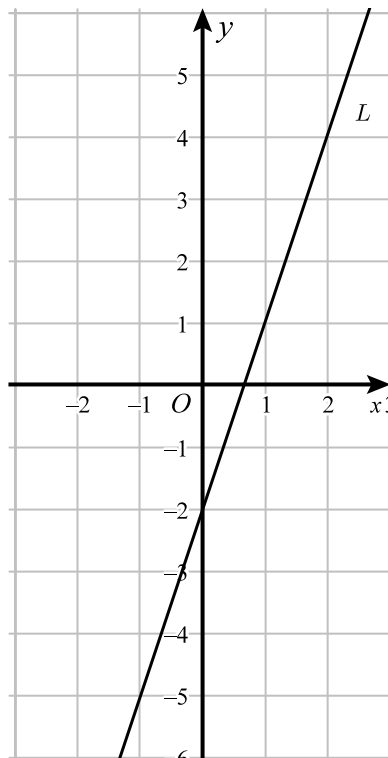
3 The line L is shown on the grid.

Find an equation for L .

Give the equation in the form of $y = mx + c$

$m =$ _____

$c =$ _____



Answer 1: 3

2: -2

- 4 Given that the slope of the line is -3 and its y -intercept is 4 , write the function of it in slope-intercept form.

Answer $y = -3x + 4$

Solution By definition, the function is written as $y = -3x + 4$.

- 5 Given that the slope of the line is -2 and it passes through point $(1, 1)$, write the equation of it in point-slope form.

Answer $y - 1 = -2(x - 1)$

Solution By definition, the point-slope form is $y - 1 = -2(x - 1)$.

- 6 Given that the slope of the line is -5 and its y -intercept is 1 , write the equation of it in slope-intercept form.

Answer $y = -5x + 1$

Solution By definition, the slope-intercept form is $y = -5x + 1$.

- 7 Given that the slope of the line is -3 and it passes through point $(1, 2)$, write the equation of it in point-slope form.

Answer $y - 2 = -3(x - 1)$

Solution By definition, the point-slope form is $y - 2 = -3(x - 1)$.

- 8 Given that the slope of the line is -2 and it passes through point $(1, 1)$, write the equation of it in point-slope form.

Answer $y - 1 = -2(x - 1)$

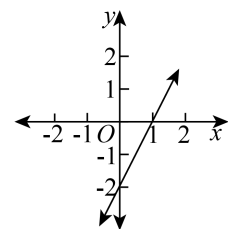
Solution By definition, the point-slope form is $y - 1 = -2(x - 1)$.

- 9 Given that the slope of the line is 2 and it passes through the point $(-4, -9)$, write down the equation of line l_1 in point-slope form.

Answer $y + 9 = 2(x + 4)$

Solution By definition, the point-slope form is $y + 9 = 2(x + 4)$.

- 10 The graph of the line is shown below, write the equation of it in slope-intercept form.



Answer $y = 2x - 2$

Solution Suppose $y = mx + b$ ($m \neq 0$).

According to the graph, the points $(0, -2)$ and $(1, 0)$ lies on it, so: $\begin{cases} m = 2 \\ b = -2 \end{cases}$.

The slope-intercept equation of the line is $y = 2x - 2$.