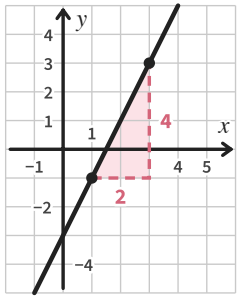
Gradient and $y = mx + c$

ANSWERS

1

Find the gradient of the line.



run = 2

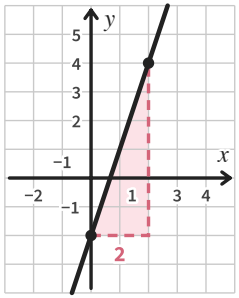
rise = 4

gradient = $\frac{4}{2}$

Gradient = 2

2

Find the gradient of the line.



run = 2

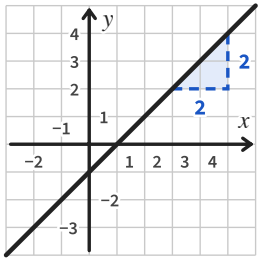
rise = 6

gradient = $\frac{6}{2} = 3$

Gradient = 3

3

Draw a triangle under the line.
Find the gradient.



run = 2

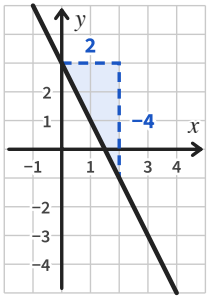
rise = 2

gradient = $\frac{2}{2} = 1$

Gradient = 1

4 *Notice the change!*

Find the gradient of the line.



run = 2

rise = −4

gradient = $\frac{-4}{2} = -2$

Gradient = −2

5

Write down the gradient and the y intercept of the line $y = 5x - 2$.

Gradient = 5

y intercept = −2

6

Find the gradient and the y intercept of the line $3y = 6x + 9$.

Divide every term by 3: $y = 2x + 3$

Gradient = 2

y intercept = 3

7

Amara says the gradient of $y = 7 - 2x$ is 7. Explain her mistake. Write down the gradient and the y intercept.

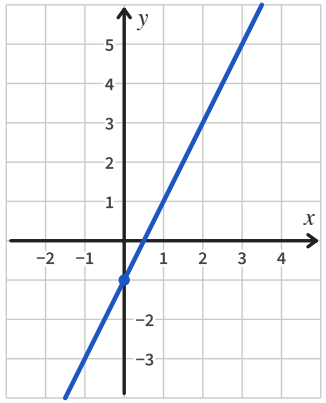
7 is the y intercept, and −2 is the number in front of x

Gradient = −2

y intercept = 7

8

Draw the line $y = 2x - 1$ on the grid.



y intercept = −1

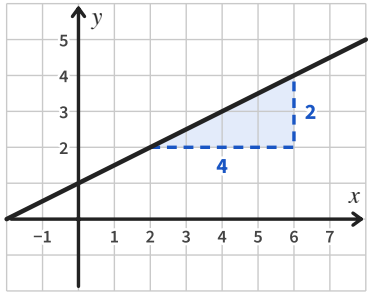
gradient = 2: across 1, up 2

Gradient and $y = mx + c$ *further practice*

ANSWERS

9

Find the gradient of the line.



rise 2, run 4

$\frac{2}{4} = \frac{1}{2}$

Answer $\frac{1}{2}$

10

Which line is steeper, $y = 3x + 5$ or $2y = 7x + 1$? Show how you know.

$y = 3.5x + 0.5$: gradient 3.5

3.5 is more than 3

Answer $2y = 7x + 1$

11

Find the gradient and the y intercept of the line $5y = 2x + 10$.

divide every term by 5

$y = \frac{2}{5}x + 2$

Answer $\frac{2}{5}$ and 2

12

Find the gradient and the y intercept of the line $2y = 8 - 6x$.

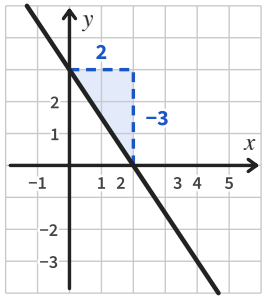
$y = 4 - 3x$

so $y = -3x + 4$

Answer -3 and 4

13

Find the gradient of the line.



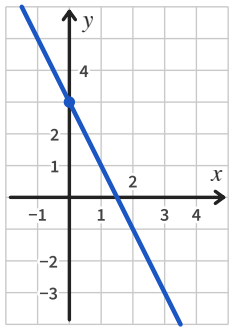
down 3 for every 2 across

$-3 \div 2 = -1.5$

Answer -1.5

14

Draw the line $3y = 9 - 6x$ on the grid.



$y = 3 - 2x$: through (0, 3)

across 1, down 2

Answer on the grid

15

Which line does not cross the y axis at the same point as the others?

A $y = 5x + 4$

B $2y = 3x + 8$

C $y = 4 - x$

D $4y = x + 8$

A, B and C cross at 4

D: $y = \frac{1}{4}x + 2$, crosses at 2

Answer D

16

The line $ky = 6x + 3$ has gradient 2.
Find the value of k and the y intercept.

$6 \div k = 2$, so $k = 3$

$y = 2x + 1$

Answer $k = 3$, y intercept 1