Perpendicular lines

1

Find the equation of the line with gradient **2** that passes through (3, 8).

$y = 2x + c$

$8 = 2 \times 3 + c$

Answer

2

Find the equation of the line with gradient **4** that passes through (1, 9).

$y = 4x + c$

Answer

3

Find the equation of the line with gradient **−3** that passes through (2, 1).

Answer

4

Find the equation of the line perpendicular to $y = 2x + 1$ that passes through (4, 5).

$-1 \div 2 = -\frac{1}{2}$

$5 = -\frac{1}{2} \times 4 + c$

Answer

5

Find the equation of the line perpendicular to $y = -3x + 4$ that passes through (3, 6).

$-1 \div (-3) = \frac{1}{3}$

Answer

6

Find the equation of the line perpendicular to $y = \frac{1}{4}x - 2$ that passes through (1, 3).

Answer

7 *Notice the change!*

Find the equation of the line perpendicular to $y = 5 - x$ that passes through (2, 6).

Answer

8

Kim finds the line perpendicular to $y = 3x + 2$ that passes through (3, 4). She gets $y = 3x - 5$. Explain her mistake and find the right equation.

Answer

Perpendicular lines *further practice*

9

Find the equation of the line perpendicular to $y = 4x - 3$ that passes through (8, 1).

Answer

10

Find the equation of the line perpendicular to $y = -2x + 5$ that passes through (−2, 4).

Answer

11

Find the equation of the line perpendicular to $y = 3x + 1$ that crosses the y axis at (0, 4).

Answer

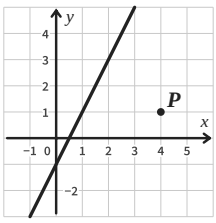
12

Find the equation of the line perpendicular to $y = \frac{2}{3}x + 2$ that passes through (2, 1).

Answer

13

Find the equation of the line through P perpendicular to the line on the grid.



Answer

14

On a plan, a footpath follows the line $y = 2x + 1$. A new path meets it at right angles at the point (2, 5).
Find the equation of the new path.

Answer

15

Line L is perpendicular to $y = x + 2$ and passes through (1, 3). Where does L cross the x axis?

Answer

16

Is the line through (0, 3) and (4, 1) perpendicular to $y = 2x + 7$?
Show how you know.

Answer