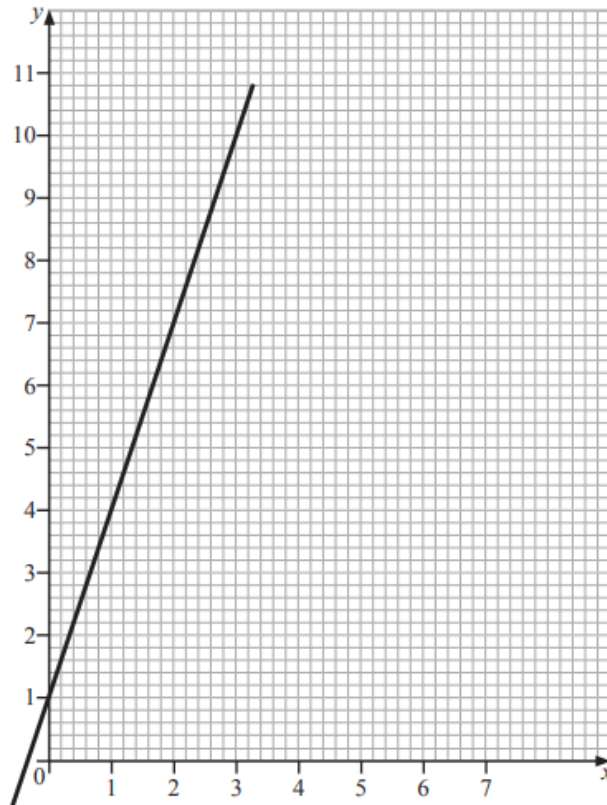


# $m_4 = 21$ days to go!

8



(a) Find the gradient of the line shown.

Answer \_\_\_\_\_ [1]

(b) Hence write down the equation of the line in the form  $y = mx + c$

Answer \_\_\_\_\_ [1]

(c) Write down the equation of the line which is parallel to the line shown and which passes through the point  $(0, -1)$ .

Answer \_\_\_\_\_ [2]

(d) Explain why the straight lines  $y = 3x - 2$  and  $3y + x = 5$  are perpendicular.

[2]

- 3 A square of side  $x$  cm is lengthened by 2 cm on one side and 4 cm on the other side to create a rectangle.

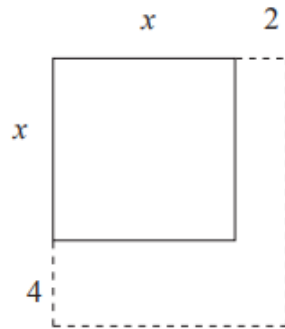


diagram not  
drawn accurately

- (a) Write an expression for the area of the rectangle.

Answer \_\_\_\_\_ [2]

- (b) The area of the rectangle is  $48\text{cm}^2$   
Show that  $x^2 + 6x - 40 = 0$

[2]

- (c) Hence solve the equation to find the value of  $x$ .

Answer  $x =$  \_\_\_\_\_ [3]