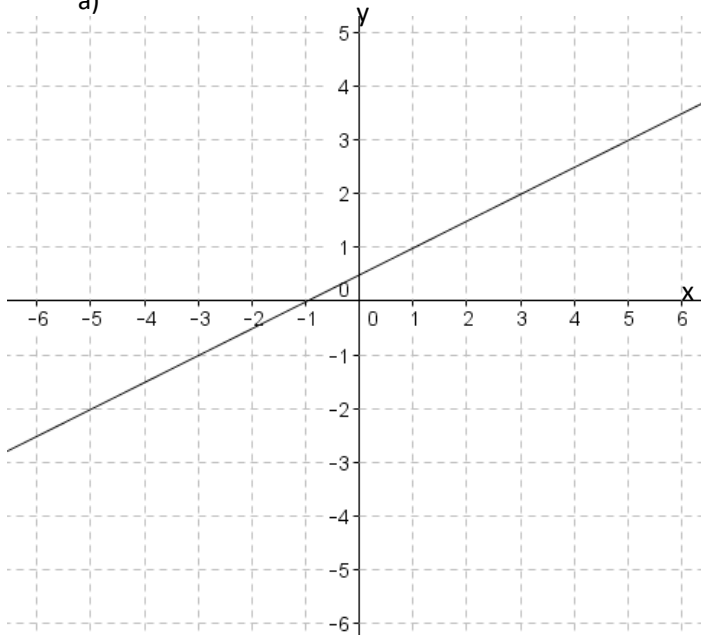


# Algebra lesson 7 quiz answers

Wednesday, 11 December 2013  
11:33 AM

1. Find the equation of the lines below:

a)



Pick 2 points: (1,1) and (3,2)

$$\text{Rise} = 2 - 1 = 1$$

$$\text{Run} = 3 - 1 = 2$$

$$\text{Gradient} = m = \frac{\text{rise}}{\text{run}} = \frac{1}{2}$$

$$y = mx + c$$

$$y = \frac{1}{2}x + c$$

When  $x=1, y=1$

$$1 = \frac{1}{2} \times 1 + c$$

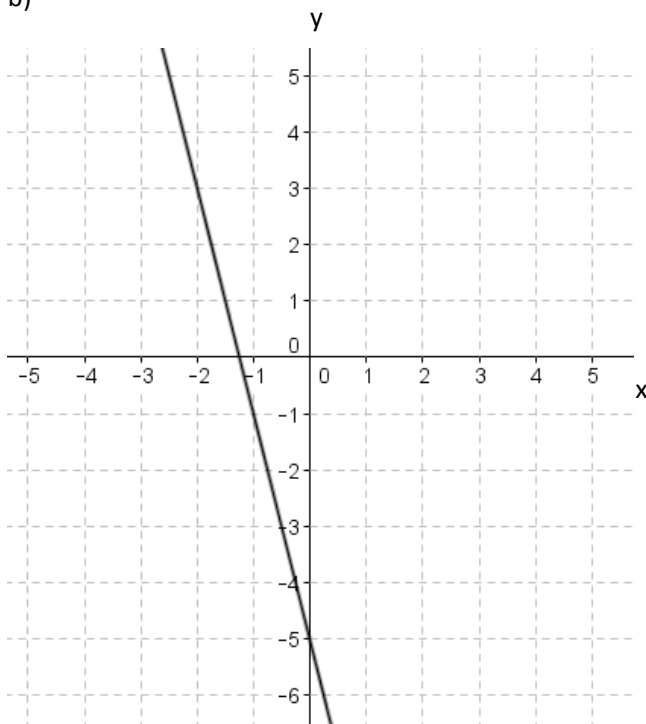
$$1 = \frac{1}{2} + c$$

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

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

$$\text{Answer: } y = \frac{1}{2}x + \frac{1}{2}$$

b)



Pick 2 points: (-2,3) and (-1,-1)

$$\text{Rise} = -1 - 3 = -4$$

$$\text{Run} = -1 - -2 = 1$$

$$\text{Gradient} = m = \frac{\text{rise}}{\text{run}} = \frac{-4}{1} = -4$$

$$y = mx + c$$

$$y = -4x + c$$

When  $x=-1, y=-1$

$$-1 = -4 \times -1 + c$$

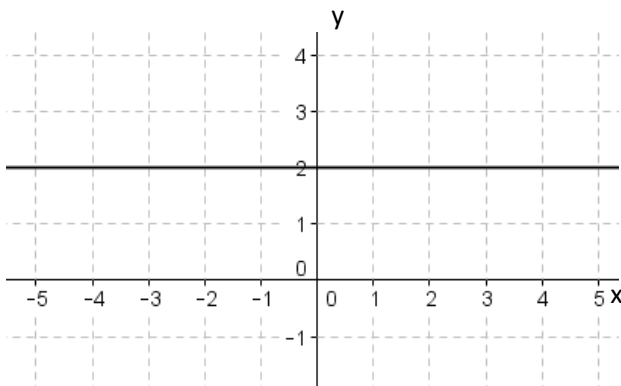
$$-1 = 4 + c$$

$$-1 - 4 = c$$

$$-5 = c$$

$$\text{Answer: } y = -4x - 5$$

c)



Pick 2 points: (1,2) and (2,2)

$$\text{Rise} = 2 - 2 = 0$$

$$\text{Run} = 2 - 1 = 1$$

$$m = \frac{\text{rise}}{\text{run}} = \frac{0}{1} = 0$$

$$y = mx + c$$

When  $x=1, y=2$

$$2 = 0 \times 1 + c$$

$$2 = c$$

$$y = 0 \times x + 2$$

$$y = 2$$

Answer:  $y=2$