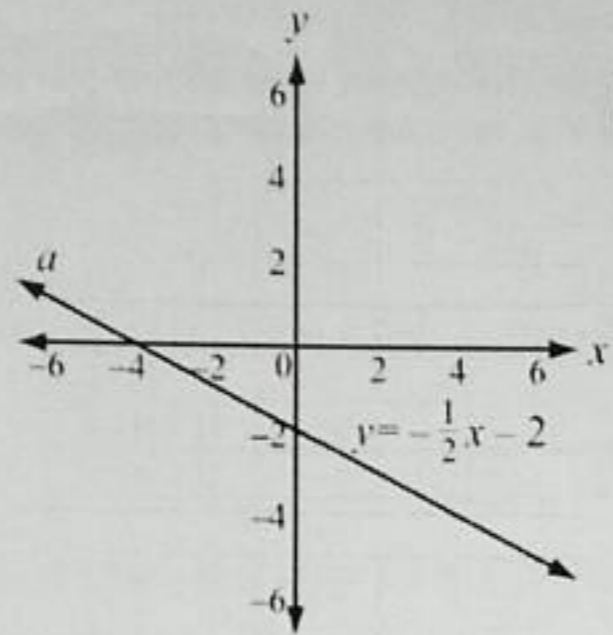


14. An equation of line a is $y = -\frac{1}{2}x - 2$. Which is an equation of the line that is perpendicular to line a and passes through point $(-4, 0)$?



$$m = -\frac{1}{2} \text{ so the } \perp m = 2$$

$$y = mx + b$$

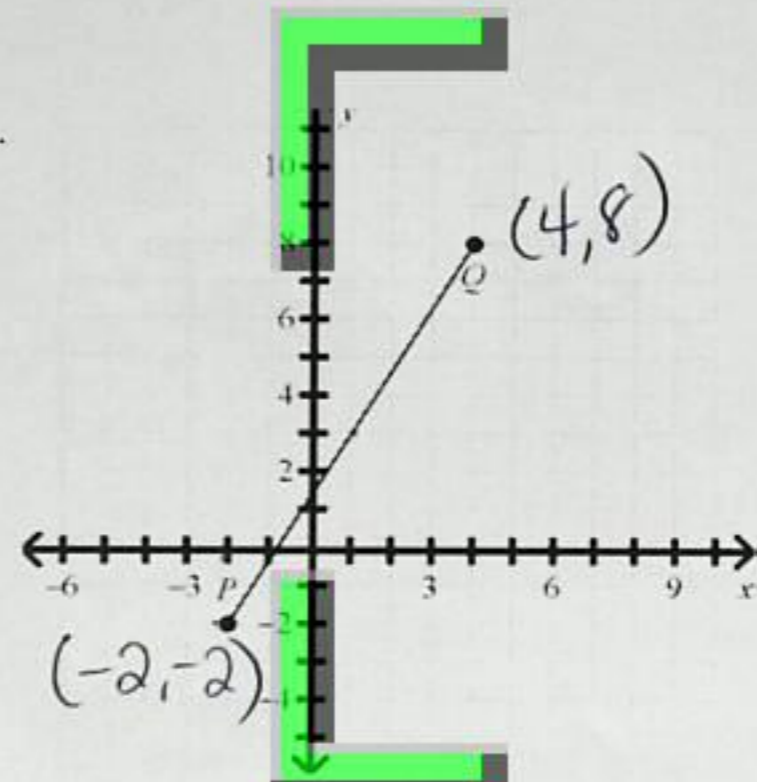
$$0 = (2)(-4) + b$$

$$0 = -8 + b$$

$$8 = b$$

$$y = 2x + 8$$

15.



$$\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

$$\left(\frac{-2 + 4}{2}, \frac{-2 + 8}{2} \right)$$

$$(1, 3)$$

What is the midpoint of PQ?

16. The coordinates of endpoint D in CD are at $D(5, 5)$. If the midpoint of the segment is at $M(1, -1)$, what are the coordinates of point C ?

$$(1, -1) = \left(\frac{5+x}{2}, \frac{5+y}{2} \right)$$

$$1 = \frac{5+x}{2}$$

$$2 = 5+x$$

$$-3 = x$$

$$-1 = \frac{5+y}{2}$$

$$-2 = 5+y$$

$$-7 = y$$

$$(-3, -7)$$