

Point-Slope Form

Write the point-slope form of the equation of the line through the given point with the given slope.

1) through $(-4, 1)$, slope $= \frac{3}{4}$

$$y - 1 = \frac{3}{4}(x + 4)$$

2) through $(-5, 2)$, slope $= -\frac{2}{5}$

$$y - 2 = -\frac{2}{5}(x + 5)$$

3) through $(-1, -4)$, slope $= 2$

$$y + 4 = 2(x + 1)$$

4) through $(-3, -3)$, slope $= \frac{7}{3}$

$$y + 3 = \frac{7}{3}(x + 3)$$

5) through $(0, 1)$, slope $= -\frac{5}{4}$

$$y - 1 = -\frac{5}{4}(x + 0)$$

or

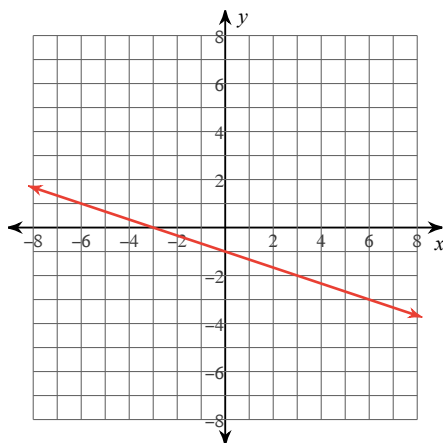
$$y - 1 = -\frac{5}{4}x$$

6) through $(1, 1)$, slope $= 2$

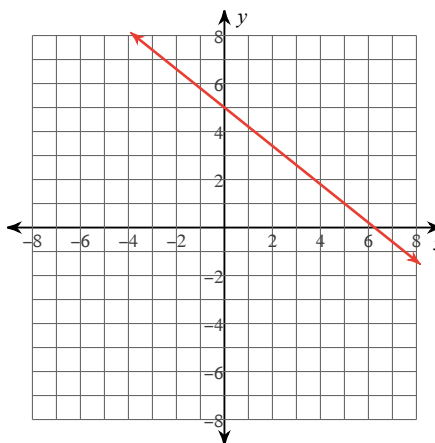
$$y - 1 = 2(x - 1)$$

Graph each line.

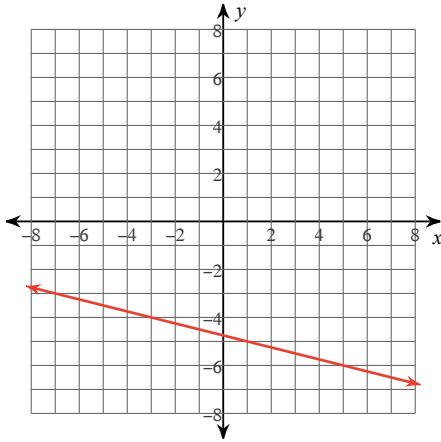
7) $y + 3 = -\frac{1}{3}(x - 6)$



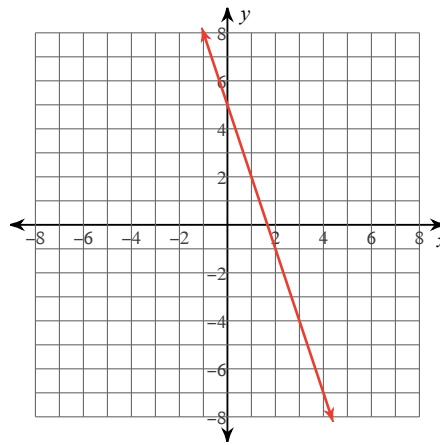
8) $y - 1 = -\frac{4}{5}(x - 5)$



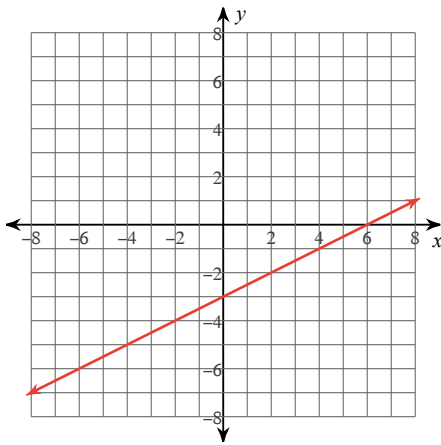
$$9) y + 4 = -\frac{1}{4}(x + 3)$$



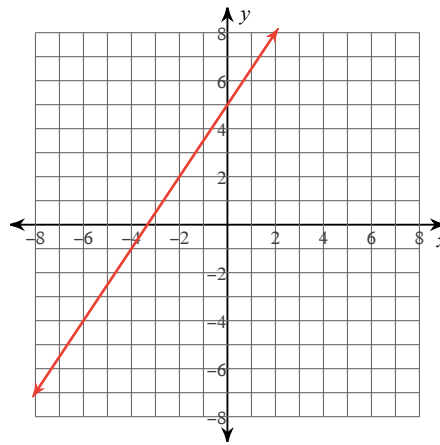
$$10) y - 2 = -3(x - 1)$$



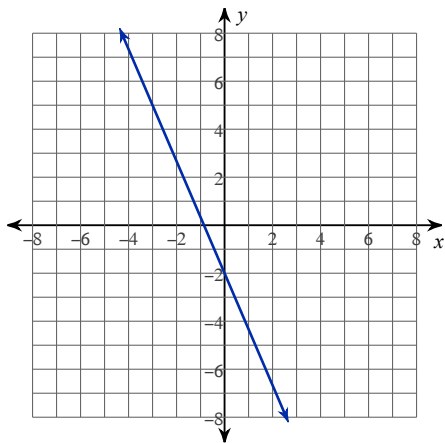
$$11) y + 1 = \frac{1}{2}(x - 4)$$



$$12) y - 2 = \frac{3}{2}(x + 2)$$



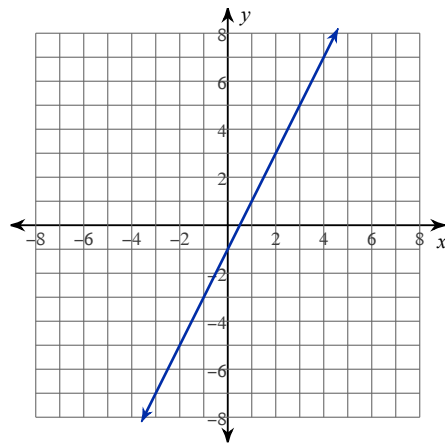
13)



$$y - 5 = -\frac{7}{3}(x - 4)$$

OR

$$y + 2 = -\frac{7}{3}(x + 0)$$

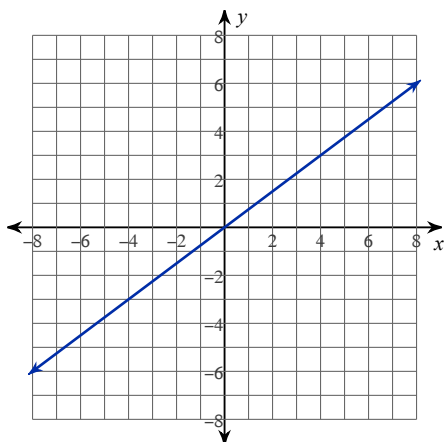


$$y - 3 = 2(x - 2)$$

OR

$$y + 3 = 2(x + 1)$$

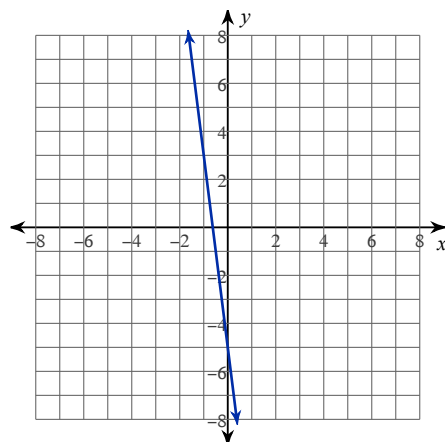
15)



$$y - 3 = \frac{3}{4}(x - 4)$$

OR

$$y + 3 = \frac{3}{4}(x + 4)$$

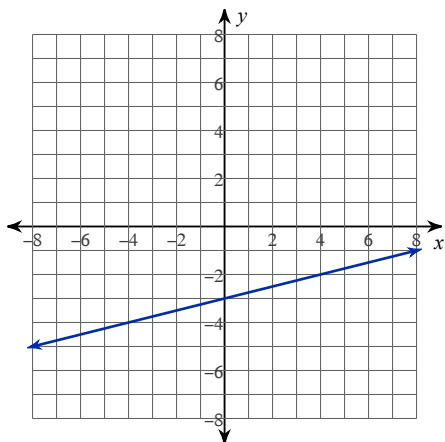


$$y - 3 = -8(x + 1)$$

OR

$$y + 5 = -8(x + 0)$$

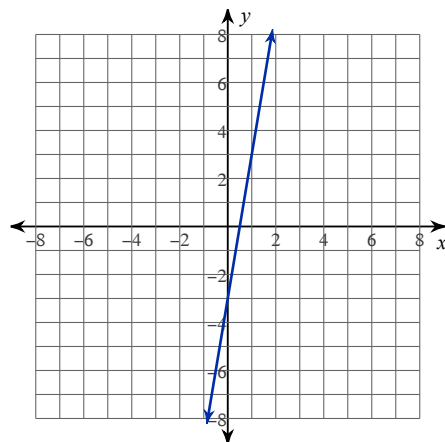
17)



$$y + 2 = \frac{1}{4}(x - 4)$$

OR

$$y + 4 = \frac{1}{4}(x + 4)$$



$$y - 3 = 6(x - 1)$$

OR

$$y + 3 = 6(x + 0)$$