Algebra 1 Name Key

Slope-Intercept Form

Date

Write the slope-intercept form of the equation of each line given the slope and y-intercept.

1) Slope $= \frac{3}{2}$, y-intercept $= 1$

$y = \frac{3}{2}x + 1$

2) Slope $= -2$, y-intercept $= -1$

$y = -2x - 1$

3) Slope $= \frac{1}{4}$, y-intercept $= 0$

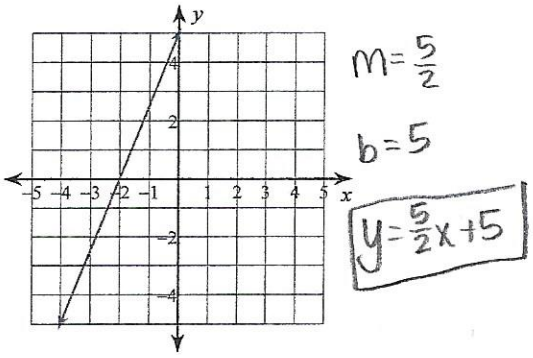
$y = \frac{1}{4}x$

4) Slope $= 0$, y-intercept $= 1$

$y = 1$

Write the slope-intercept form of the equation of each line.

5)

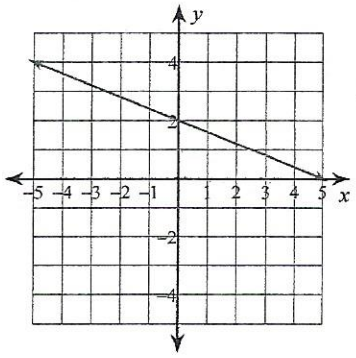


$m = \frac{5}{2}$

$b = 5$

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

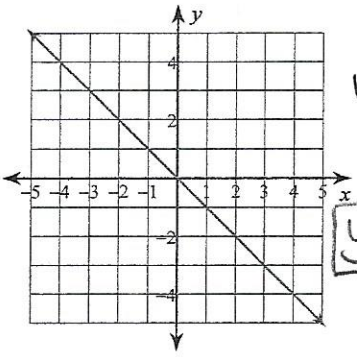
6)



$m = \frac{-2}{5}$ $b = 2$

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

7)

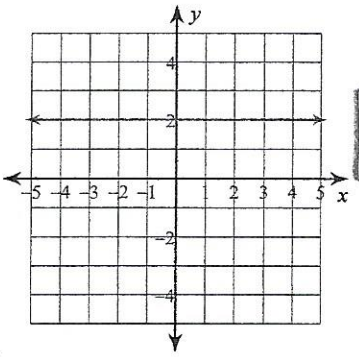


$m = -1$

$b = 0$

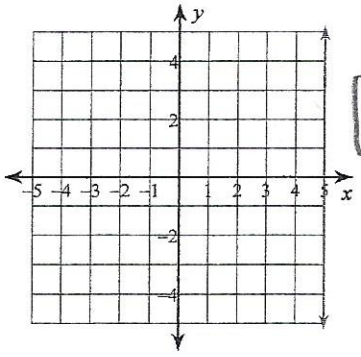
$y = -x$

8)



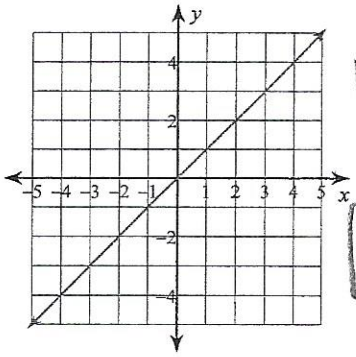
$y = 2$

9)



$x = 5$

10)



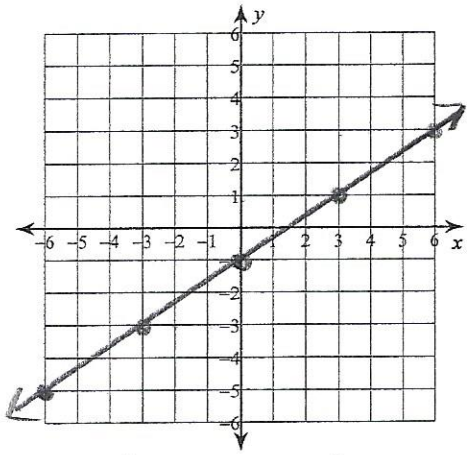
$m = 1$

$b = 0$

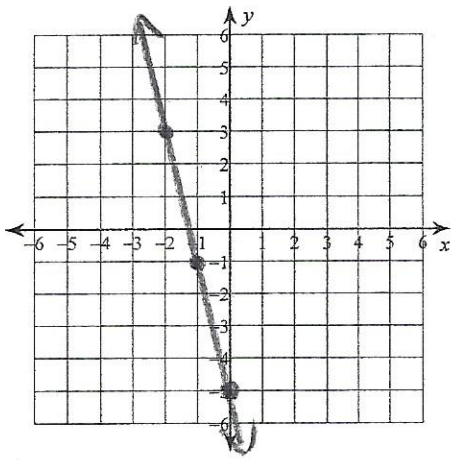
$y = x$

Sketch the graph of each line.

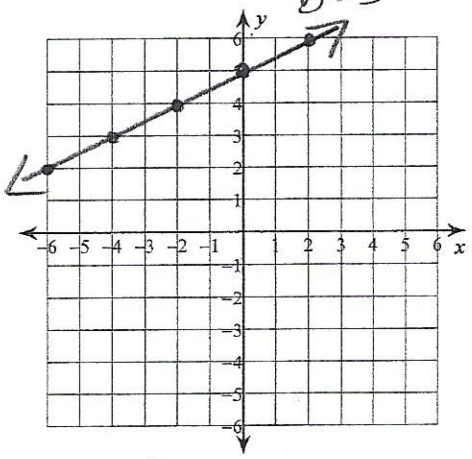
11) $y = \frac{2}{3}x - 1$ $m = \frac{2}{3}$ $b = -1$



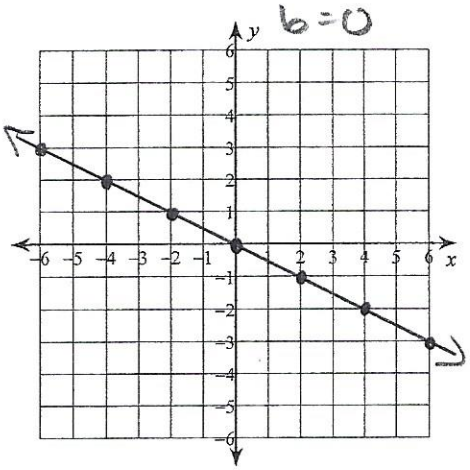
12) $y = -4x - 5$ $m = -4$ $b = -5$



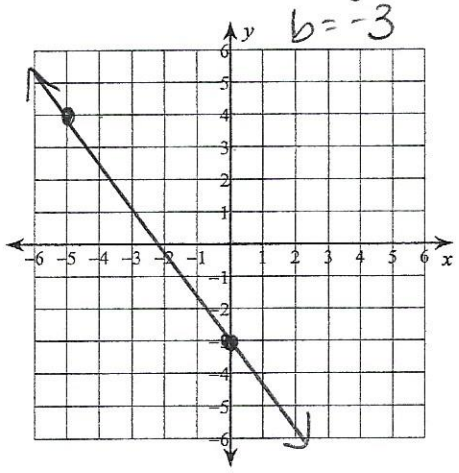
13) $y = \frac{1}{2}x + 5$ $m = \frac{1}{2}$ $b = 5$



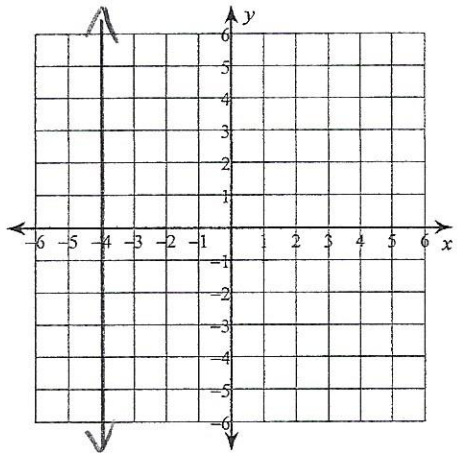
14) $y = -\frac{1}{2}x$ $m = -\frac{1}{2}$ $b = 0$



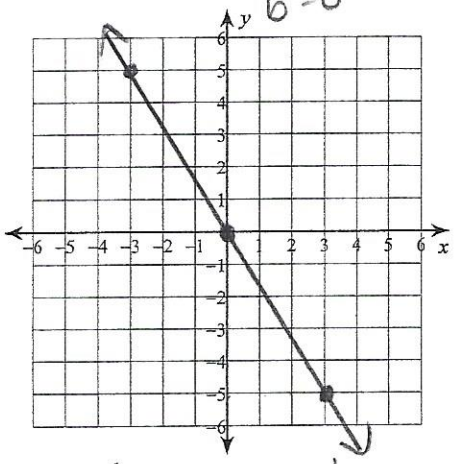
15) $y = -\frac{7}{5}x - 3$ $m = \frac{-7}{5}$ $b = -3$



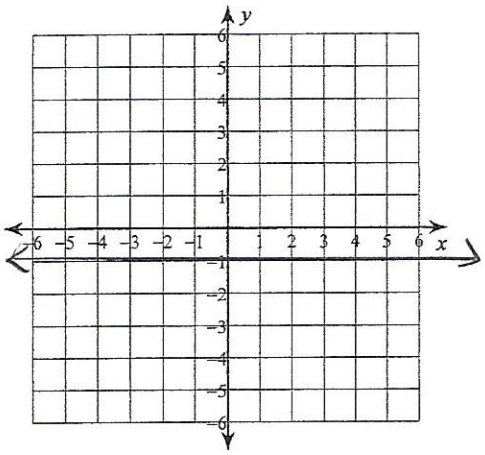
16) $x = -4$



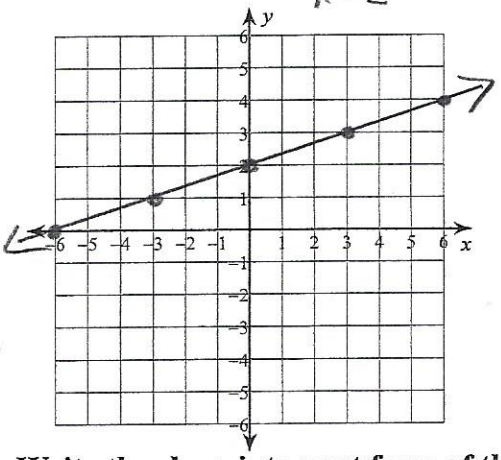
17) $y = -\frac{5}{3}x$ $m = \frac{-5}{3}$ $b = 0$



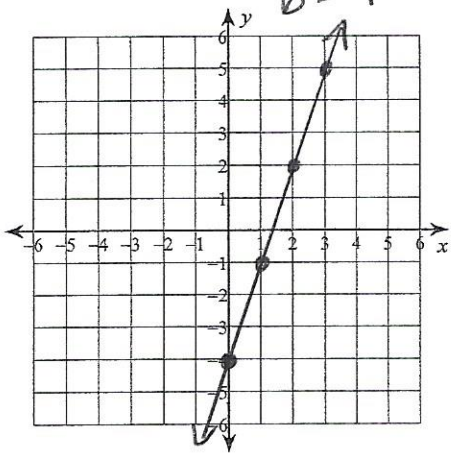
18) $y = -1$



19) $y = \frac{1}{3}x + 2$ $m = \frac{1}{3}$ $x = 2$



20) $y = 3x - 4$ $m = 3$ $b = -4$



Write the slope-intercept form of the equation of each line.

21) $x + 3y = -15$

$-x \quad -x$

$\frac{3y}{3} = \frac{-1x}{3} - \frac{15}{3}$

$y = -\frac{1}{3}x - 5$

22) $3x - 4y = 14$

$-3x \quad -3x$

$\frac{-4y}{-4} = \frac{-3x + 14}{-4}$

$y = \frac{3}{4}x - \frac{7}{2}$

23) $y - 4 = \frac{6}{5}(x - 5)$

$y - 4 = \frac{6}{5}x - 6$

$+4 \quad +4$

$y = \frac{6}{5}x - 2$

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

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

$-1 \quad -1$

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

25) $-2x - y = -2$

$+2x \quad +2x$

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

$y = -2x + 2$

26) $y + 4 + \frac{1}{4}x = 0$

$-\frac{1}{4}x \quad -\frac{1}{4}x$

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

$-4 \quad -4$

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