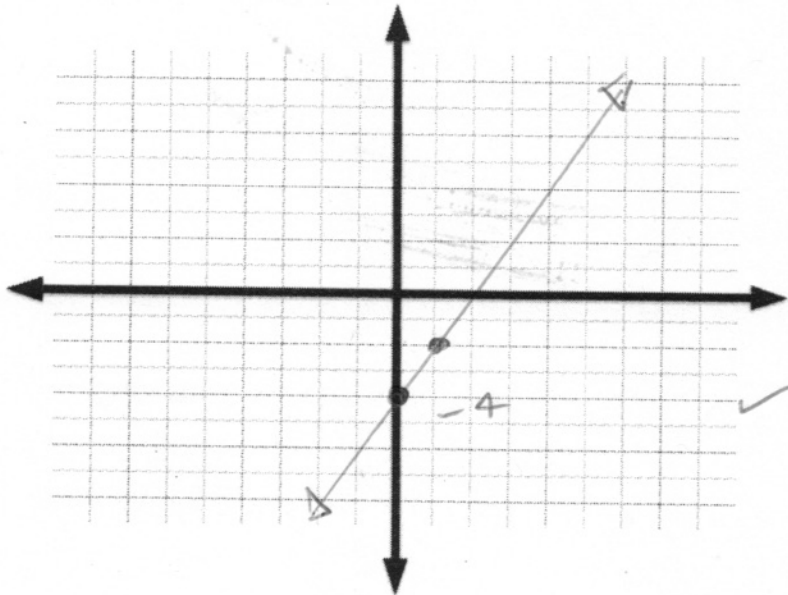


East Los Angeles College
 Department of Mathematics
 Math 115
 Test 2

30 ✓

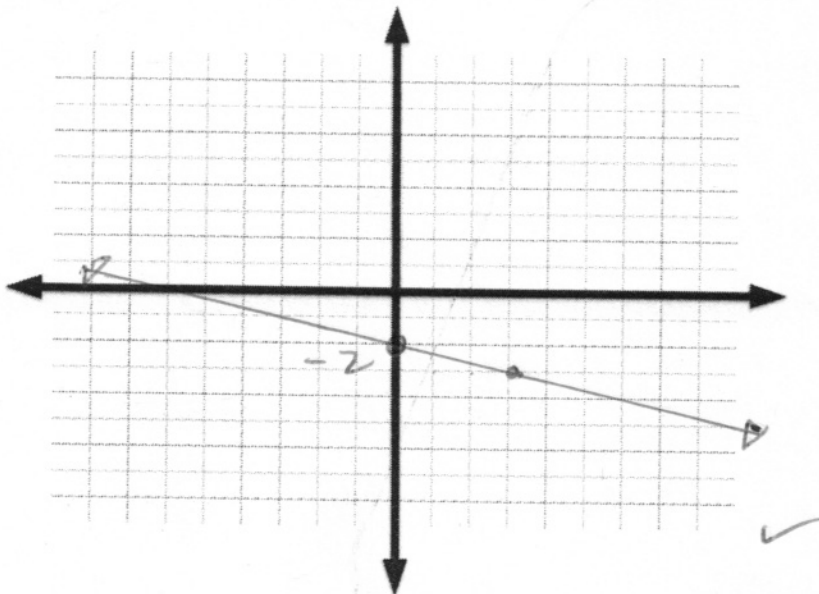
Graph the following linear equations.

1) $2x - y = 4$



$$\begin{array}{r} 2x - y = 4 \\ -2x \quad -2x \\ \hline -y = -2x + 4 \\ \hline | y = 2x - 4 | \\ \hline \checkmark \quad \checkmark \end{array}$$

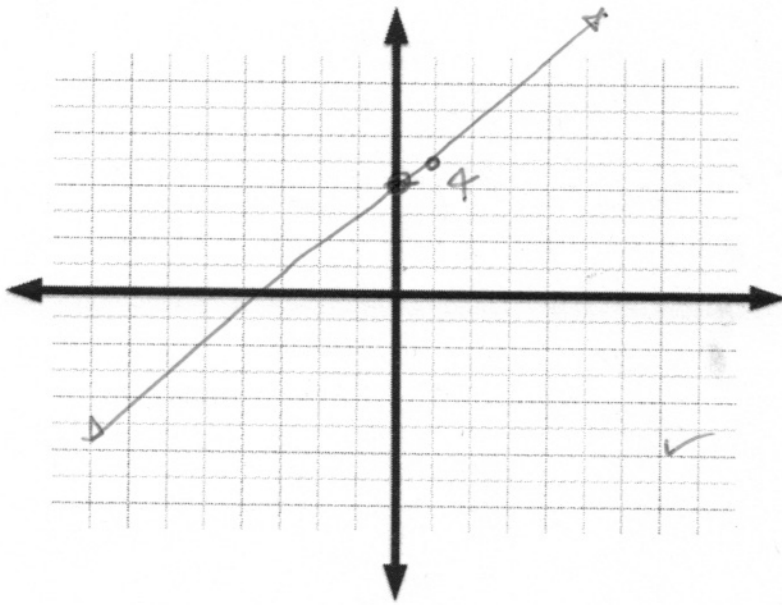
2) $x + 3y = -6$



$$\begin{array}{r} x + 3y = -6 \\ -x \quad -x \\ \hline 3y = -x - 6 \\ \frac{3y}{3} = \frac{-x - 6}{3} \\ \hline y = -\frac{1}{3}x - \frac{6}{3} \\ \hline | y = -\frac{1}{3}x - 2 | \\ \hline \checkmark \quad \checkmark \end{array}$$

6 ✓

3) ~~$2x - y = 4$~~ $-x + y = 4$

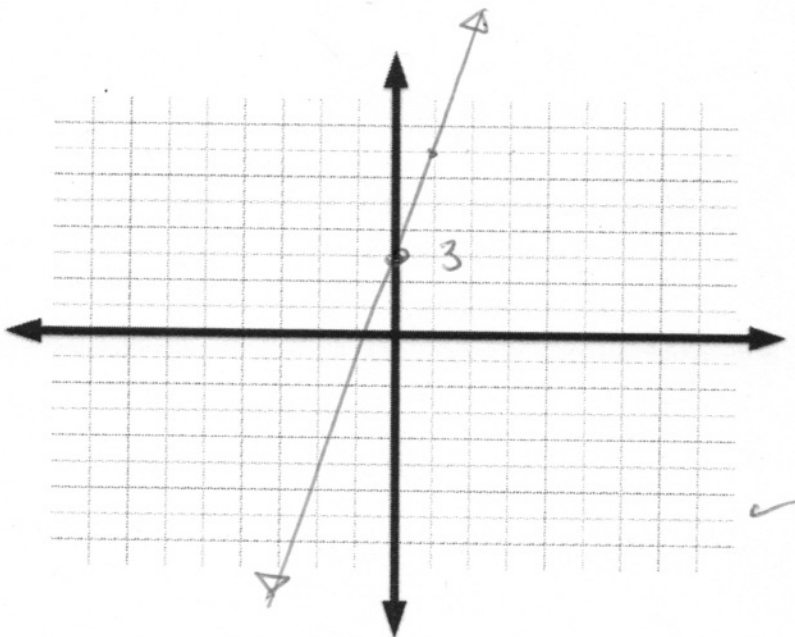


$$\begin{array}{r} -x + y = 4 \\ +x \qquad \qquad +x \end{array}$$

$$\begin{array}{r} | y = x + 4 | \\ \hline \checkmark \qquad \checkmark \end{array}$$

4) ~~$x + 3y = -6$~~

$4x - y = -3$



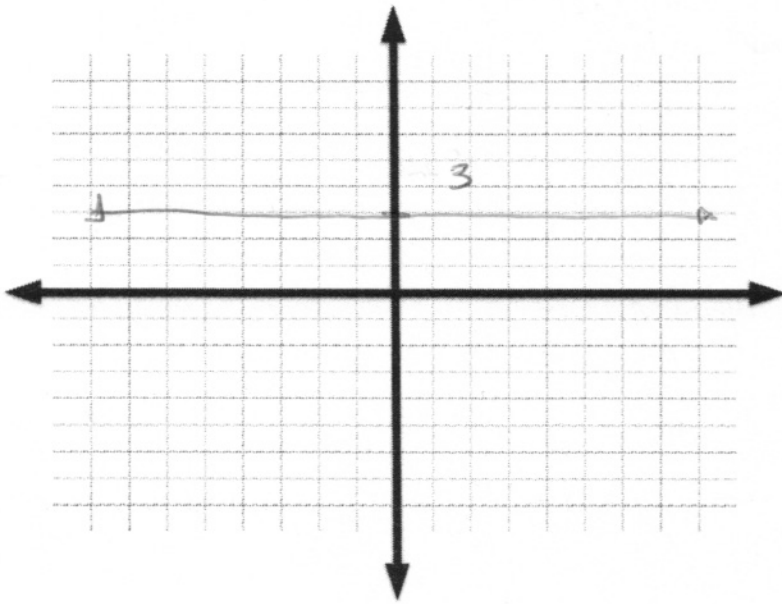
$$\begin{array}{r} 4x - y = -3 \\ -4x \qquad \qquad -4x \end{array}$$

$$-y = -4x - 3$$

$$\begin{array}{r} | y = 4x + 3 | \\ \hline \checkmark \qquad \checkmark \end{array}$$

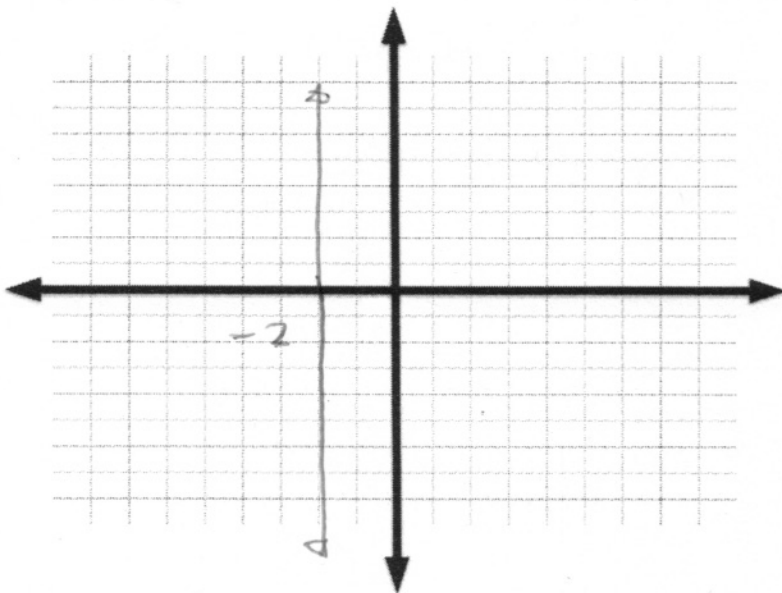
6 ✓

5) $y = 3$



✓

6) $x = -2$



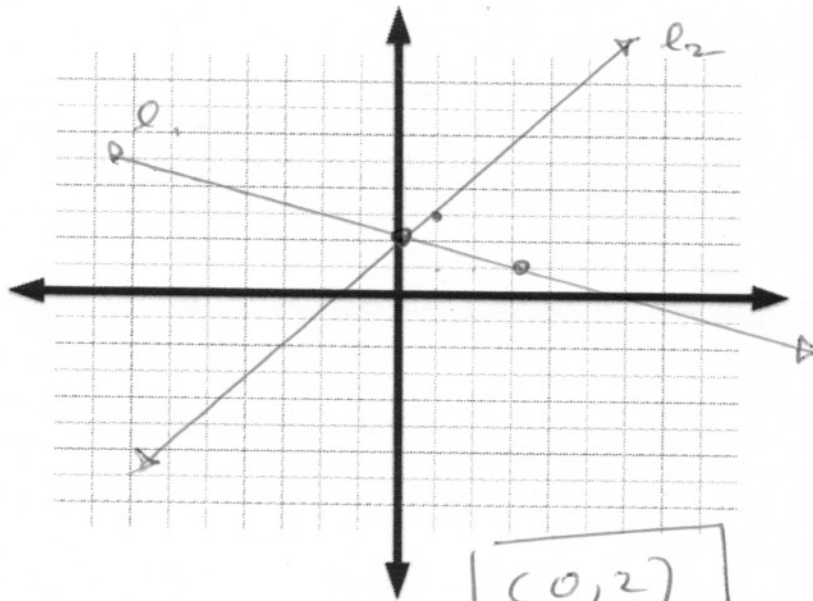
✓

2 ✓

7) Solve the linear system by graphing.

$$l_1 \quad x + 3y = 6$$

$$l_2 \quad x - y = -2$$



$$\boxed{(0, 2)}$$

(l1)

$$x + 3y = 6$$

$$-x \qquad -x$$

$$\frac{3y}{3} = \frac{-x + 6}{3}$$

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

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

(l2) $x - y = -2$

$$-x \qquad -x$$

$$-y = -x - 2$$

$$\boxed{y = x + 2}$$

Determine the equation of the line that:

8) Passes through the point $(4, -1)$ with slope $-\frac{1}{2}$

$$y - y_1 = m(x - x_1)$$

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

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

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

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

9) Passes through the point $(2, 0)$ with slope 4

$$y - y_1 = m(x - x_1)$$

$$y - 0 = 4(x - 2)$$

$$\boxed{y = 4x - 8}$$

10

10) Passes through the points $(1, -2)$ and $(4, 1)$

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

$$m = \frac{1 - (-2)}{4 - 1}$$

$$m = \frac{1+2}{3}$$

$$m = 1$$

$$y - y_1 = m(x - x_1)$$

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

$$y + 2 = x - 1$$

$$y = x - 3$$

Solve for the indicated variable.

11) $\frac{A}{L} = \frac{w}{L}$ for w

$$\frac{A}{L} = w$$

12) $P = a + b + c$ for a

$$P - b - c = a$$

13) $P = 2l + 2w$ for l

$$\frac{P - 2w}{2} = l$$

$$\frac{P - 2w}{2} = l$$

14) $F = \frac{9}{5}C + 32$ for C

$$F - 32 = \frac{9}{5}C$$

$$\frac{5}{9} \cdot (F - 32) = \frac{5}{9} \cdot \frac{9}{5} C$$

$$\frac{5}{9} (F - 32) = C$$