

For questions 1-3, solve for  $x$ .

1.  $3x - 7 = 5$

$$\begin{array}{r} 3x - 7 = 5 \\ +7 \quad +7 \\ \hline 3x = 12 \\ \frac{3x}{3} = \frac{12}{3} \end{array}$$

$$x = 4$$

2.  $2(4x + 3) = 22$

$$\begin{array}{r} 8x + 6 = 22 \\ -6 \quad -6 \\ \hline 8x = 16 \\ \frac{8x}{8} = \frac{16}{8} \end{array}$$

$$x = 2$$

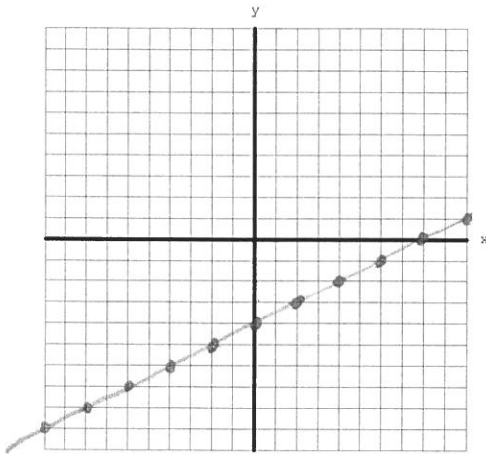
3.  $-5(2x - 1) - 2x = 2x - 9$

$$\begin{array}{r} -10x + 5 - 2x = 2x - 9 \\ -12x + 5 = 2x - 9 \\ +12x \quad +12x \\ \hline 5 = 14x - 9 \\ +9 \quad +9 \\ \hline 14 = 14x - 9 \\ \frac{14}{14} = \frac{14x}{14} \end{array}$$

$$x = 1$$

For questions 4-5, graph.

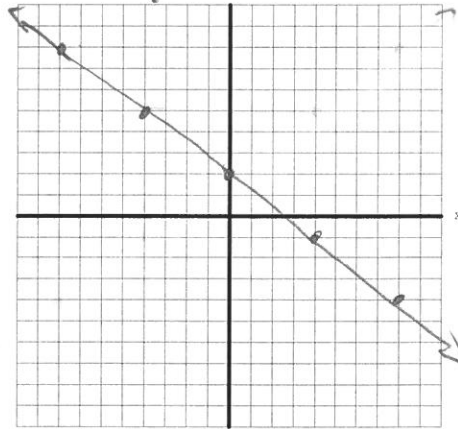
4.  $y = \frac{1}{2}x - 4$



5.  $3x + 4y = 8$

$$\begin{array}{r} 3x + 4y = 8 \\ -3x \quad -3x \\ \hline 4y = -3x + 8 \end{array}$$

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



For questions 6-7, find the slope.

6.  $(6, 7)$   $(4, 2)$

$$\frac{7-2}{6-4} = \frac{5}{2}$$

7.  $(-3, 9)$   $(5, -1)$

$$\frac{9-(-1)}{-3-5} = \frac{10}{-8}$$

$$-\frac{5}{4}$$

For questions 8-9, write the equation of the line in  $y = mx + b$  form using the given information.

8.  $m = 3, b = -7$

$$y = 3x - 7$$

9.  $m = \frac{4}{5} (-10, 14)$

$$14 = \frac{4}{5}(-10) + b$$

$$14 = -8 + b$$

$$+8 \quad +8$$

$$22 = b$$

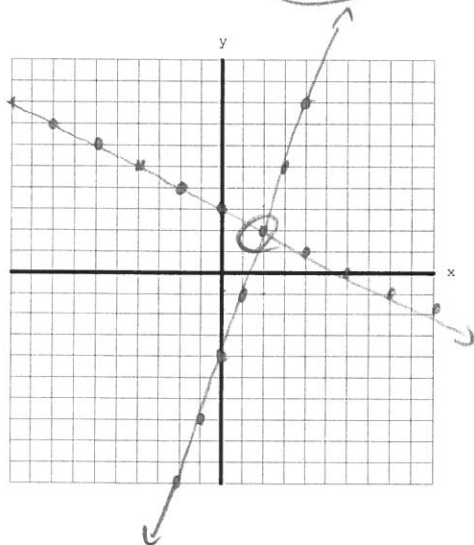
$$y = \frac{4}{5}x + 22$$

For question 10, solve the system by graphing.

10.  $y = 3x - 4$

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

$$(2, 2)$$



For question 11, solve the system of equations by substitution.

11.  $y = -7x - 15$

$$6x + 7y = 24$$

$$6x + 7(-7x - 15) = 24$$

$$6x - 49x - 105 = 24$$

$$-43x - 105 = 24$$

$$+105 \quad +105$$

$$-43x = 129$$

$$-43 \quad -43$$

$$x = -3$$

$$y = -7(-3) - 15$$

$$y = +21 - 15$$

$$y = 6$$

For question 12, solve the system of equations by elimination.

12.  $-3x + 3y = 3$

$$-3(-5x + y = 13)$$

$$-3x + 3y = 3$$

$$+15x - 3y = -39$$

$$\frac{12x = -36}{12 \quad 12}$$

$$x = -3$$

$$-5(-3) + y = 13$$

$$15 + y = 13$$

$$-15 \quad -15$$

$$y = -2$$