

Systems of Equations Test

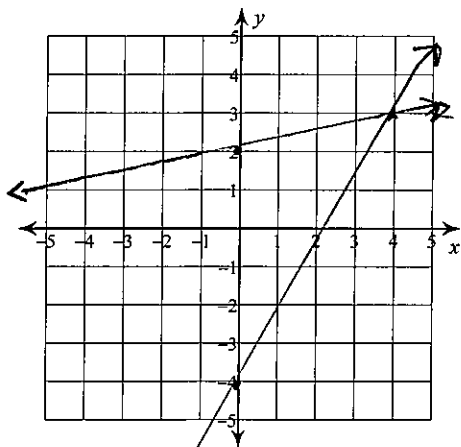
Name _____

Date _____ Period _____

Solve each system by graphing.

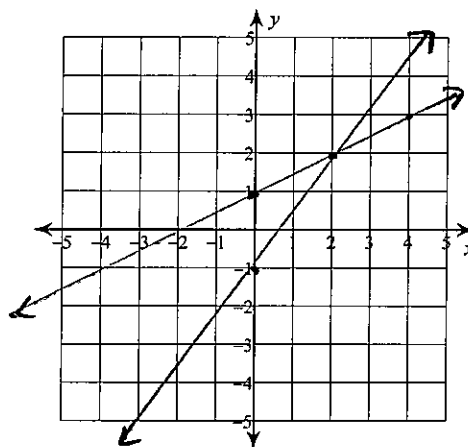
1) $y = \frac{7}{4}x - 4$

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

 $(4, 3)$

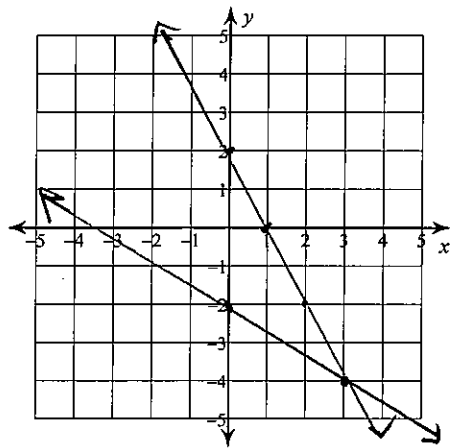
2) $y = \frac{1}{2}x + 1$

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

 $(2, 2)$

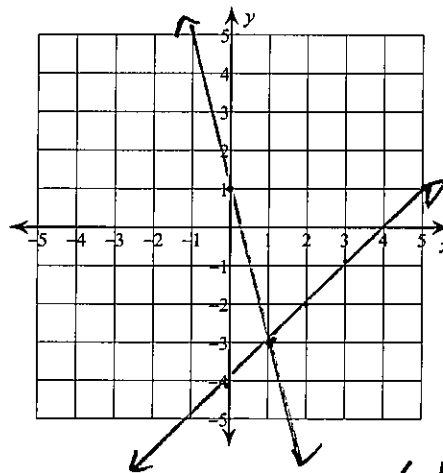
3) $y = -2x + 2$

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

 $(3, -4)$

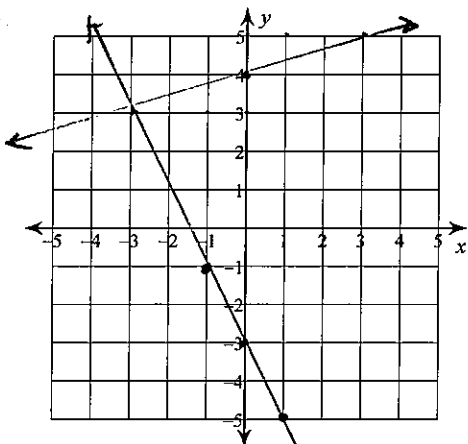
4) $y = -4x + 1$

$y = x - 4$

 $(1, -3)$

5) $y = -2x - 3$

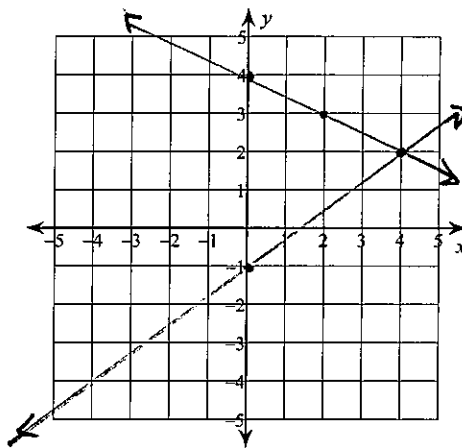
$y = \frac{1}{3}x + 4$



$(-3, 3)$

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

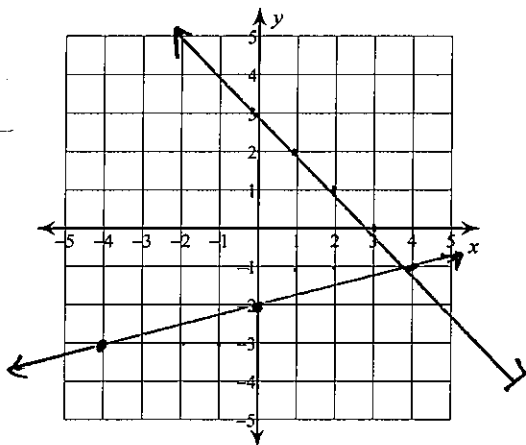
$y = \frac{3}{4}x - 1$



$(4, 2)$

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

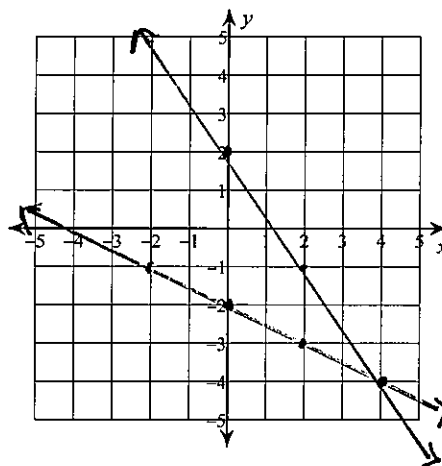
$y = -x + 3$



$(4, -1)$

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

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



$(4, -4)$

Solve by substitution review

Solve by substitution.

$$\begin{aligned} 1. \quad x &= 3y \\ 5y - x &= 8 \end{aligned}$$

$$5y - 3y = 8$$

$$\frac{2y}{2} = \frac{8}{2}$$

$$y = 4$$

$$x = 3(4)$$

$$x = 12$$

$$(12, 4)$$

$$\begin{aligned} 2. \quad x &= y + 2 \\ 3y + x &= 14 \end{aligned}$$

$$3y + (y + 2) = 14$$

$$\frac{4y + 2 = 14}{-2 \quad -2}$$

$$\frac{4y}{4} = \frac{12}{4}$$

$$y = 3$$

$$x = (3) + 2$$

$$x = 5$$

$$(5, 3)$$

$$\begin{aligned} 3. \quad y &= -x + 3 \\ 3y - 1 &= 5x \end{aligned}$$

$$3(-x + 3) - 1 = 5x$$

$$-3x + 9 - 1 = 5x$$

$$\frac{-3x + 8 = 5x}{+3x \quad +3x}$$

$$\frac{8}{8} = \frac{8x}{8}$$

$$x = 1$$

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

$$y = 2$$

$$(1, 2)$$

$$\begin{aligned} 4. \quad y &= 2x \\ x + y &= 9 \end{aligned}$$

$$x + (2x) = 9$$

$$\frac{3x = 9}{3 \quad 3}$$

$$x = 3$$

$$y = 2(3)$$

$$y = 6$$

$$(3, 6)$$

Solve by elimination

1. $x + 2y = 7$
 $3x - 2y = 5$

$$\begin{array}{r} 4x = 12 \\ \hline 4 \quad 4 \end{array}$$

$x = 3$

$$\begin{array}{r} (3) + 2y = 7 \\ -3 \quad \quad -3 \\ \hline \end{array}$$

$$2y = \frac{4}{2}$$

$y = 2$

$(3, 2)$

3. $2x - y = 3$
 $4x + y = 9$

$$\begin{array}{r} 6x = 12 \\ \hline 6 \quad 6 \end{array}$$

$x = 2$

$$4(2) + y = 9$$

$$\begin{array}{r} 8 + y = 9 \\ -8 \quad -8 \\ \hline \end{array}$$

$y = 1$

$(2, 1)$

2. $x + 3y = 0$
 $2x - 3y = 9$

$$\begin{array}{r} 3x = 9 \\ \hline 3 \quad 3 \end{array}$$

$x = 3$

$$\begin{array}{r} (3) + 3y = 0 \\ -3 \quad \quad -3 \\ \hline \end{array}$$

$$\begin{array}{r} 3y = -3 \\ \hline 3 \quad 3 \end{array}$$

$y = -1$

$(3, -1)$

4. $2x + y = 10$
 $3x - y = 5$

$$\begin{array}{r} 5x = 15 \\ \hline 5 \quad 5 \end{array}$$

$x = 3$

$$2x + y = 10$$

$$2(3) + y = 10$$

$$\begin{array}{r} 6 + y = 10 \\ -6 \quad -6 \\ \hline \end{array}$$

$y = 4$

$(3, 4)$

6. $3x - 2y = 13$
 $4x + 2y = 8$

$$\begin{array}{r} 7x = 21 \\ \hline 7 \quad 7 \end{array}$$

$x = 3$

$$4(3) + 2y = 8$$

$$\begin{array}{r} 12 + 2y = 8 \\ -12 \quad -12 \\ \hline \end{array}$$

$$\begin{array}{r} 2y = -4 \\ \hline 2 \quad 2 \end{array}$$

$y = -2$

$(3, -2)$

+5
5. $2x + 3y = 7$
 $-2x - y = -5$

$$\begin{array}{r} 2y = 2 \\ \hline 2 \quad 2 \end{array}$$

$y = 1$

+1
 $(2, 1)$

$$2x + 3(1) = 7$$

$$\begin{array}{r} 2x + 3 = 7 \\ -3 \quad -3 \\ \hline \end{array}$$

$$\begin{array}{r} 2x = 4 \\ \hline 2 \quad 2 \end{array}$$

$x = 2$

$$4(3) + 2y = 8$$

$$\begin{array}{r} 12 + 2y = 8 \\ -12 \quad -12 \\ \hline \end{array}$$

$$\begin{array}{r} 2y = -4 \\ \hline 2 \quad 2 \end{array}$$

$y = -2$