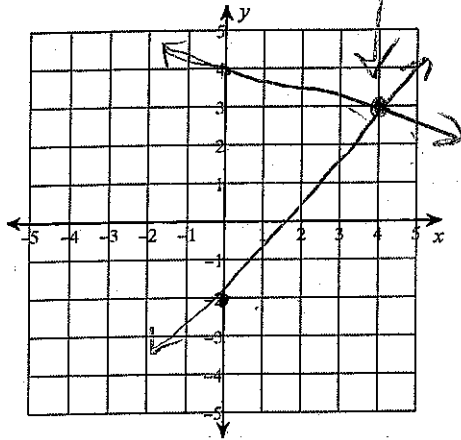


# 4.1-4.3 Quiz Review

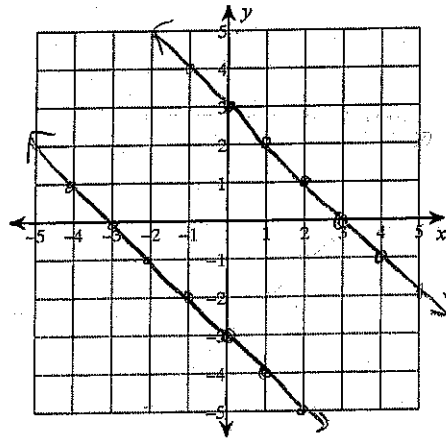
Name Key

Solve each system by graphing.

1)  $y = -\frac{1}{4}x + 4$   
 $y = \frac{5}{4}x - 2$



2)  $y = -x - 3$  same slope  
 $y = -x + 3$



No solution

Solve each system by substitution.

3)  $-8x + 4y = -4$   
 $y = -2x + 15$

$-8x + 4(-2x + 15) = -4$

$-8x - 8x + 60 = -4$

$-16x + 60 = -4$   
 $-60 \quad -60$

$\frac{-16x}{-16} = \frac{-64}{-16}$

$x = 4$

$y = -2(4) + 15 = -8 + 15$

$y = 7$

(4, 7)

4)  $x - 3y = 19$   
 $-4x - 3y = 14$

$x - 3y = 19$   
 $+3y + 3y$

$x = 19 + 3y$

$-4(19 + 3y) - 3y = 14$

$-76 - 12y - 3y = 14$

$-76 - 15y = 14$   
 $+76 \quad +76$

$-15y = 90$

$-15 \quad -15$

$y = -6$

$x - 3(-6) = 19$

$x + 18 = 19$

$-18 \quad -18$

$x = 1$

(1, -6)

Solve each system by elimination.

$$\begin{array}{r} 5) \quad -4x + 9y = -4 \\ + \quad 4x - 4y = -16 \\ \hline \end{array}$$

$$\frac{5y}{5} = \frac{-20}{5}$$

$$y = -4$$

$$-4x + 9(-4) = -4$$

$$\begin{array}{r} -4x - 36 = -4 \\ +36 \quad +36 \\ \hline \end{array}$$

$$\frac{-4x}{-4} = \frac{32}{-4}$$

$$x = -8$$

$$\boxed{(-8, -4)}$$

$$\begin{array}{r} 6) \quad -4x + 4y = -8 \\ 2(-6x + 2y = -24) \\ \hline \end{array}$$

$$-4x + 4y = -8$$

$$-12x + 4y = -48$$

$$\frac{8x}{8} = \frac{40}{8}$$

$$x = 5$$

$$-4(5) + 4y = -8$$

$$-20 + 4y = -8$$

$$+20 \quad +20$$

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

$$y = 3$$

$$\boxed{(5, 3)}$$

- 7) Adam's school is selling tickets to the annual dance competition. On the first day of ticket sales the school sold 7 adult tickets and 6 child tickets for a total of \$119. The school took in \$175 on the second day by selling 14 adult tickets and 3 child tickets. What is the price each of one adult ticket and one child ticket?

$$\begin{array}{r} 2 \cdot (7a + 6c = 119) \\ 14a + 3c = 175 \end{array}$$

$$\begin{array}{r} 14a + 12c = 238 \\ -14a + 3c = 175 \\ \hline \end{array}$$

$$9c = 63$$

$$c = 7$$

$$7a + 6(7) = 119$$

$$7a + 42 = 119$$

$$-42 \quad -42$$

$$7a = 77$$

$$7a = 77$$

$$a = 11$$

Will the system have 1 solution, no solution, or infinitely many solutions?

$$\begin{array}{r} 8) \quad x - 2y = 6 \\ - \quad 5x - 2y = -2 \\ \hline \end{array}$$

$$\frac{-4x}{-4} = \frac{8}{-4}$$

$$x = -2$$

$$(-2) - 2y = 6$$

$$+2 \quad +2$$

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

$$y = -4$$

One solution

$$\begin{array}{r} 9) \quad 2x - 4y = -8 \\ -2x \quad +1 \\ \hline y = \frac{1}{2}x + 2 \end{array}$$

$$\frac{-4y}{-4} = \frac{-2x - 8}{-4}$$

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

Same line

↳ infinitely many solutions