

Quiz Review

7-2 thru 7-4

1. $y = 5x$
 $2x + 3y = 34$

$$2x + 3(5x) = 34$$

$$y = 5(2)$$

$$17x = 34$$

$$y = 10$$

$$x = 2$$

$$(2, 10)$$

$$\begin{array}{r} 2. \quad -4x + 2y = 8 \\ + \quad 4x - 3y = -10 \\ \hline \end{array}$$

$$\cancel{-y} = \frac{-2}{-1}$$

$$y = 2$$

$$\boxed{(-1, 2)}$$

$$4x - 3(2) = -10$$

$$\begin{array}{r} 4x - 6 = -10 \\ +6 \quad +6 \end{array}$$

$$4x = -4$$

$$x = -1$$

$$3. \quad 3r - 5s = -35$$

$$+ 2r - 5s = +30$$

$$r = -5$$

$$\boxed{(-5, 4)}$$

$$2(-5) - 5s = -30$$

$$-10 - 5s = -30$$

$$+10 \quad +10$$

$$-5s = -20$$

$$s = 4$$

$$4. \quad 3(x + 5y = 4)$$
$$3x - 7y = -10$$

$$\begin{array}{r} 3x + 15y = 12 \\ - 3x - 7y = -10 \\ \hline \end{array}$$

$$22y = 22$$

$$y = 1$$

$$x + 5(1) = 4$$

$$x + \cancel{5} = 4 - \cancel{5}$$

$$x = -1$$

$$\boxed{(-1, 1)}$$

$$5.4 \begin{cases} 2x - y = 6 \\ 3x + 4y = -2 \end{cases}$$

$$\begin{array}{r} 8x - 4y = 24 \\ + \quad 3x + 4y = -2 \\ \hline \end{array}$$

$$11x = 22$$

$$x = 2$$

$$(2, -2)$$

$$\begin{array}{r} 2x - y = 6 \\ -4 \quad -4 \end{array}$$

$$-y = 2$$

$$y = -2$$

$$\begin{cases} 6.3 \{ 4x - 7y = 10 \} \\ 4 \{ 3x + 2y = -7 \} \end{cases}$$

$$\begin{array}{r} \cancel{12x} - 21y = 30 \\ - \cancel{12x} + 8y = -28 \\ \hline \end{array}$$

$$\begin{array}{r} \cancel{-29y} = \frac{58}{-29} \\ \hline \end{array}$$

$$y = -2$$

$$4x - 7(-2) = 10$$

$$\begin{array}{r} 4x + 14 = 10 \\ \cancel{-14} \quad \cancel{-14} \end{array}$$

$$4x = -4$$

$$x = -1$$

$$\boxed{(-1, -2)}$$

7. One number added to twice another number is 23. Four times the first number added to twice the other number is 38. What are the numbers?

$$\begin{array}{r} 1x + 2y = 23 \\ - 4x + 2y = 38 \\ \hline -3x = -15 \\ \frac{-3x}{-3} = \frac{-15}{-3} \\ x = 5 \end{array}$$

$$\begin{array}{r} x + 2y = 23 \\ -5 \\ \hline 2y = 18 \\ y = 9 \end{array}$$