

Intro to Ch. 7 - WS #6

Solve, using addition.

$$\begin{array}{rcl} 1. \quad 3(2x + 2y = 8) & 6x + 6y = 24 & \\ 2(5x - 3y = 4) & + 10x - 6y = 8 & \\ \hline & 16x = 32 & \end{array}$$

$$5(2) - 3y = 4$$

$$10 - 3y = 4$$

$$\begin{array}{r} -10 \quad -10 \\ \hline -3y = -6 \\ \frac{-3y}{-3} = \frac{-6}{-3} \\ y = 2 \end{array}$$

$$\frac{16x}{16} = \frac{32}{16}$$

$$x = 2$$

$$(2, 2)$$

$$2. \begin{cases} 2x - 5y = 7 \\ 3x - 2y = -17 \end{cases}$$

$$\begin{array}{r} 6x - 15y = 21 \\ + \quad -6x + 4y = 34 \\ \hline -11y = 55 \\ \frac{-11y}{-11} = \frac{55}{-11} \\ y = -5 \end{array}$$

$$\begin{array}{l} 3x - 2(-5) = -17 \\ 3x + 10 = -17 \\ \quad -10 \quad -10 \\ \hline 3x = -27 \\ \quad \quad \quad \frac{-27}{3} \\ x = -9 \end{array}$$

$$\boxed{(-9, -5)}$$

$$\begin{aligned} 3(5x - 2y - 11) &= 0 \\ -5(3x + 5y - 19) &= 0 \end{aligned}$$

$$\begin{aligned} 15x - 6y - 33 &= 0 \\ -15x - 25y + 95 &= 0 \end{aligned}$$

$$\begin{aligned} -31y + 62 &= 0 \\ -62 \quad -62 \\ \hline -31y &= -62 \\ -31 \quad -31 \\ \hline y &= 2 \end{aligned}$$

$$\begin{aligned} 3x + 5(2) - 19 &= 0 \\ 3x + 10 - 19 &= 0 \\ 3x - 9 &= 0 \\ +9 \quad +9 \\ \hline 3x &= 9 \\ \frac{3x}{3} &= \frac{9}{3} \\ x &= 3 \end{aligned}$$

$$(3, 2)$$

4. $4x + 3y = -2$
 $3x + 2y = 1$

5. $5x - 2y = 4$
 $6x + 2y = 18$

6. $4x - 3y = -20$
 $-x - 8y = 5$

7. $7x - 3y = -5$
 $3x + 2y = 11$