

4.2

$$\begin{aligned}
 1) \quad y &= -3x \\
 y &= 6x - 9 \\
 -3x &= 6x - 9 \\
 \hline
 -6x &= -6x - 9 \\
 \hline
 -\frac{9x}{-9} &= \frac{-9}{-9} \\
 x &= 1
 \end{aligned}$$

$$\begin{aligned}
 y &= -3(1) = -3 \\
 (1, -3)
 \end{aligned}$$

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

$$\begin{aligned}
 y &= -2(-2) - 9 \\
 y &= 4 - 9 \\
 y &= -5 \\
 (-2, -5)
 \end{aligned}$$

$$\begin{aligned}
 5) \quad y &= 6x + 4 \\
 y &= -3x - 5 \\
 6x + 4 &= -3x - 5 \\
 \hline
 +3x & \quad +3x \\
 9x + 4 &= -5 \\
 \hline
 -4 & \quad -4 \\
 \hline
 \frac{9x}{9} &= \frac{-9}{9} \\
 x &= -1
 \end{aligned}$$

$$\begin{aligned}
 y &= 6(-1) + 4 \\
 y &= -6 + 4 \\
 y &= -2 \\
 (-1, -2)
 \end{aligned}$$

$$\begin{aligned}
 7) \quad y &= 3x + 2 \\
 y &= -3x + 8 \\
 3x + 2 &= -3x + 8 \\
 \hline
 +3x & \quad +3x \\
 6x + 2 &= 8 \\
 \hline
 -2 & \quad -2 \\
 \hline
 \frac{6x}{6} &= \frac{6}{6} \\
 x &= 1
 \end{aligned}$$

$$\begin{aligned}
 y &= 3(1) + 2 \\
 y &= 3 + 2 \\
 y &= 5 \\
 (1, 5)
 \end{aligned}$$

$$\begin{aligned}
 9) \quad y &= 2x - 3 \\
 y &= -2x + 9 \\
 2x - 3 &= -2x + 9 \\
 \hline
 +2x & \quad +2x \\
 4x - 3 &= 9 \\
 \hline
 +3 & \quad +3 \\
 \hline
 \frac{4x}{4} &= \frac{12}{4} \\
 x &= 3
 \end{aligned}$$

$$\begin{aligned}
 y &= 2(3) - 3 \\
 y &= 6 - 3 \\
 y &= 3 \\
 (3, 3)
 \end{aligned}$$

$$\begin{aligned}
 11) \quad y &= 6x - 6 \\
 -3x - 3y &= -24 \\
 -3x - 3(6x - 6) &= \\
 -24 & \\
 -3x - 18x + 18 &= -24 \\
 -21x + 18 &= -24 \\
 \hline
 -18 & \quad -18 \\
 \hline
 \frac{-21x}{-21} &= \frac{-42}{-21} \\
 x &= 2
 \end{aligned}$$

$$\begin{aligned}
 y &= 6(2) - 6 \\
 y &= 12 - 6 \\
 y &= 6 \\
 (2, 6)
 \end{aligned}$$

$$\begin{aligned}
 13) \quad y &= -6 \\
 3x - 6y &= 30 \\
 3x - 6(-6) &= 30 \\
 3x + 36 &= 30 \\
 \hline
 -36 & \quad -36 \\
 \hline
 \frac{3x}{3} &= \frac{-6}{3} \\
 x &= -2 \\
 (-2, -6)
 \end{aligned}$$

$$\begin{aligned}
 15) \quad y &= -5 \\
 3x + 4y &= -17 \\
 3x + 4(-5) &= -17 \\
 3x - 20 &= -17 \\
 \hline
 +20 & \quad +20 \\
 \hline
 \frac{3x}{3} &= \frac{3}{3} \\
 x &= 1 \\
 (1, -5)
 \end{aligned}$$

$$\begin{aligned}
 17) \quad -2x + 2y &= 18 \\
 y &= 7x + 15 \\
 -2x + 2(7x + 15) &= 18 \\
 -2x + 14x + 30 &= 18 \\
 12x + 30 &= 18 \\
 \hline
 -30 & \quad -30 \\
 \hline
 \frac{12x}{12} &= \frac{-12}{12} \\
 x &= -1
 \end{aligned}$$

$$\begin{aligned}
 y &= 7(-1) + 15 \\
 y &= -7 + 15 \\
 y &= 8 \\
 (-1, 8)
 \end{aligned}$$

$$\begin{aligned}
19) \quad & y = -8x + 19 \\
& -x + 6y = 16 \\
& -x + 6(-8x + 19) = 16 \\
& -x - 48x + 114 = 16 \\
& -49x + 114 = 16 \\
& \underline{-114 \quad -114} \\
& \frac{-49x}{-49} = \frac{-98}{-49} \\
& x = 2 \\
& y = -8(2) + 19 \\
& y = -16 + 19 \\
& y = 3 \\
& (2, 3)
\end{aligned}$$

$$\begin{aligned}
21) \quad & 7x - 2y = -7 \\
& y = 7 \\
& 7x - 2(7) = -7 \\
& 7x - 14 = -7 \\
& \underline{+14 \quad +14} \\
& \frac{7x}{7} = \frac{7}{7} \\
& x = 1 \\
& (1, 7)
\end{aligned}$$

$$\begin{aligned}
23) \quad & x - 5y = 7 \\
& 2x + 7y = -20 \\
& x - 5y = 7 \\
& \underline{+5y \quad +5y} \\
& x = 5y + 7 \\
& 2(5y + 7) + 7y = -20 \\
& 10y + 14 + 7y = -20 \\
& 17y + 14 = -20 \\
& \underline{-14 \quad -14} \\
& \frac{17y}{17} = \frac{-34}{17} \\
& y = -2 \\
& x - 5(-2) = 7 \\
& x + 10 = 7 \\
& \underline{-10 \quad -10} \\
& x = -3 \\
& (-3, -2)
\end{aligned}$$

$$\begin{aligned}
25) \quad & -2x - y = -5 \\
& x - 8y = -23 \\
& \underline{+8y \quad +8y} \\
& x = 8y - 23 \\
& -2(8y - 23) - y = -5 \\
& -16y + 46 - y = -5 \\
& -17y + 46 = -5 \\
& \underline{-46 \quad -46} \\
& \frac{-17y}{-17} = \frac{-51}{-17} \\
& y = 3 \\
& x - 8(3) = -23 \\
& x - 24 = -23 \\
& \underline{+24 \quad +24} \\
& x = 1 \\
& (1, 3)
\end{aligned}$$

$$\begin{aligned}
27) \quad & -6x + y = 20 \\
& -3x - 3y = -18 \\
& -6x + y = 20 \\
& \underline{+6x \quad +6x} \\
& y = 6x + 20 \\
& -3x - 3(6x + 20) = \\
& -18 \\
& -3x - 18x - 60 = -18 \\
& -21x - 60 = -18 \\
& \underline{+60 \quad +60} \\
& \frac{-21x}{-21} = \frac{42}{-21} \\
& x = -2 \\
& y = 20 + 6(-2) \\
& y = 20 - 12 \\
& y = 8 \\
& (-2, 8)
\end{aligned}$$

$$\begin{aligned}
29) \quad & 3x + y = 9 \\
& 2x + 8y = -16 \\
& 3x + y = 9 \\
& \underline{-3x \quad -3x} \\
& y = -3x + 9 \\
& 2x + 8(-3x + 9) = -16 \\
& 2x - 24x + 72 = -16 \\
& -22x + 72 = -16 \\
& \underline{-72 \quad -72} \\
& \frac{-22x}{-22} = \frac{-88}{-22} \\
& x = 4 \\
& y = -3(4) + 9 \\
& y = -12 + 9 \\
& y = -3 \\
& (4, -3)
\end{aligned}$$

$$\begin{aligned}
31) \quad & 2x + y = 2 \\
& 3x + 7y = 14 \\
& 2x + y = 2 \\
& \underline{-2x \quad -2x} \\
& y = 2 - 2x \\
& 3x + 7(2 - 2x) = 14 \\
& 3x + 14 - 14x = 14 \\
& -11x + 14 = 14 \\
& \underline{-14 \quad -14} \\
& \frac{-11x}{-11} = \frac{0}{-11} \\
& x = 0 \\
& y = 2 - 2(0) \\
& y = 2 - 0 \\
& y = 2 \\
& (0, 2)
\end{aligned}$$

$$\begin{aligned}
33) \quad & x + 5y = 15 \\
& -3x + 2y = 6 \\
& x + 5y = 15 \\
& \underline{-5y \quad -5y} \\
& x = 15 - 5y \\
& -3(15 - 5y) + 2y = 6 \\
& -45 + 15y + 2y = 6 \\
& -45 + 17y = 6 \\
& \underline{+45 \quad \quad +45} \\
& \frac{17y}{17} = \frac{51}{17} \\
& y = 3 \\
& x = 15 - 5(3) \\
& x = 15 - 15 \\
& x = 0 \\
& (0, 3)
\end{aligned}$$

$$\begin{aligned}
35) \quad & -2x + 4y = -16 \\
& y = -2 \\
& -2x + 4(-2) = -16 \\
& -2x - 8 = -16 \\
& \underline{+8 \quad +8} \\
& \frac{-2x}{-2} = \frac{-8}{-2} \\
& x = 4 \\
& (4, -2)
\end{aligned}$$

$$\begin{aligned}
37) \quad & -6x + 6y = -12 \\
& 8x - 3y = 16 \\
& -6x + 6y = -12 \\
& \underline{+6x \quad \quad +6x} \\
& \frac{6y}{6} = \frac{6x}{6} - \frac{12}{6} \\
& y = x - 2 \\
& 8x - 3(x - 2) = 16 \\
& 8x - 3x + 6 = 16 \\
& 5x + 6 = 16 \\
& \underline{-6 \quad -6} \\
& \frac{5x}{5} = \frac{10}{5} \\
& x = 2 \\
& y = (2) - 2 \\
& y = 0 \\
& (2, 0)
\end{aligned}$$

$$\begin{aligned}
39) \quad & 2x + 3y = 16 \\
& -7x - y = 20 \\
& \underline{+7x \quad \quad +7x} \\
& -\frac{y}{-1} = \frac{7x}{-1} + 20/-1 \\
& y = -7x - 20 \\
& 2x + 3(-7x - 20) = 16 \\
& 2x - 21x - 60 = 16 \\
& -19x - 60 = 16 \\
& \underline{+60 \quad +60} \\
& \frac{-19x}{-19} = \frac{76}{-19} \\
& x = -4 \\
& y = -7(-4) - 20 \\
& y = 28 - 20 \\
& y = 8 \\
& (-4, 8)
\end{aligned}$$