

(11) $y - 3 = 7(x - 5)$ (13) $y + 3 = -1(x + 6)$ or $y + 3 = -(x + 6)$

(15) $y - 11 = \frac{4}{3}(x + 2)$ (17) $y + 9 = -\frac{7}{5}(x + 2)$

(19) $y - 10 = 2(x - 8)$

$$\begin{array}{r} y - 10 = 2x - 16 \\ -2x \qquad -2x \\ \hline -2x + y - 10 = -16 \\ \qquad +10 \qquad +10 \\ \hline -2x + y = -6 \end{array}$$

$$2x - y = 6$$

(21) $y - 9 = -6(x + 9)$

$$\begin{array}{r} y - 9 = -6x - 54 \\ \qquad +9 \qquad +9 \\ \hline y = -6x - 45 \\ +6x \qquad +6x \\ \hline 6x + y = -45 \end{array}$$

(23) $y + 7 = \frac{9}{10}(x + 3)$

$$y + 7 = \frac{9}{10}x + \frac{27}{10}$$

$$\overset{(10)}{y} + \overset{(10)}{7} = \overset{(10)}{\frac{9}{10}}x + \overset{(10)}{\frac{27}{10}}$$

$$10y + 70 = 9x + 27$$

$$\underline{-27 \qquad -27}$$

$$10y + 43 = 9x$$

$$\underline{-10y \qquad -10y}$$

$$43 = 9x - 10y$$

$$9x - 10y = 43$$

The standard form is $Ax + By = C$
The A has to be positive when writing
in standard form.

$-2x + y = -6$ must be changed to $2x - y = 6$

You cannot have
fractions as a
coefficient for Ax
 $+ By = C$ so we
eliminate the
denominator.

$$\textcircled{25} \quad 2y + 3 = -\frac{1}{3}(x - 2)$$

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

$$\begin{array}{r} 6y + 9 = -1x + 2 \\ +x \qquad \qquad +x \\ \hline x + 6y + 9 = 2 \\ \quad -9 \quad -9 \\ \hline x + 6y = -7 \end{array}$$

$$\textcircled{27} \quad y - 6 = -2(x + 9)$$

$$\begin{array}{r} y - 6 = -2x + 9 \\ +6 \qquad \qquad +6 \\ \hline y \qquad \qquad = -2x + 15 \end{array}$$

4.3

$$\textcircled{29} \quad y + 5 = -6(x + 7)$$

$$\begin{array}{r} y + 5 = -6x - 42 \\ -5 \qquad \qquad -5 \\ \hline y \qquad \qquad = -6x - 47 \end{array}$$

$$\textcircled{31} \quad y + 2 = \frac{1}{6}(x - 4)$$

$$\begin{array}{r} y + 2 = \frac{1}{6}x - \frac{2}{3} \\ -2 \qquad \qquad -2 \\ \hline y = \frac{1}{6}x - 2\frac{2}{3} \end{array} \quad \text{or } y = \frac{1}{6}x - \frac{8}{3}$$

$\frac{1}{6} \cdot 4 = \frac{4}{6} = \frac{2}{3}$

$$\textcircled{33} \quad y + 3 = -\frac{1}{3}(2x + 6)$$

$$\begin{array}{r} y + 3 = -\frac{2}{3}x - 2 \\ -3 \qquad \qquad -3 \\ \hline y \qquad \qquad = -\frac{2}{3}x - 5 \end{array}$$

$$\textcircled{37} \quad m = \frac{-2 - 7}{8 - -1} = \frac{-9}{9} = -1$$

$$y - 7 = -1(x - -1)$$

$$\begin{array}{r} y - 7 = -x - 1 \\ +7 \qquad \qquad +7 \\ \hline y \qquad \qquad = -x + 6 \\ +x \qquad \qquad +x \\ \hline x + y = 6 \end{array}$$

$$\textcircled{39} \quad 5x + 4y = 20$$