Converting a Linear Equation to Standard Form $Ax + By = C$

The goal of converting an equation to Standard or General Form is **to place x and y on one side of the equation and the constant term (the number) on the other side**. Then, if necessary, convert all coefficients to integers. If any of the coefficients or the constant are fractions, multiply the entire equation by the least common denominator of all the fractions.

Example

Convert $y = \frac{2}{3}x - 5$ to Standard Form.

$y = \frac{2}{3}x - 5$

Flip the left and right sides

$\frac{2}{3}x - 5 = y$

Add 5 to both sides

$+5 \quad +5$

$\frac{2}{3}x = y + 5$

Subtract y from both sides

$-y \quad -y$

$\frac{2}{3}x - y = 5$

Eliminate the fractions by multiplying by 3

$3\left(\frac{2}{3}x - y\right) = 3(5)$

$2x - 3y = 15$

So, $y = \frac{2}{3}x - 5$ converts to $2x - 3y = 15$

Try These

1. $y = -4x - 6$ 1. _____

2. $y = \frac{1}{4}x + 1$ 2. _____

3. $y = 8x - \frac{3}{2}$ 3. _____

4. $y = \frac{2}{5}x + \frac{1}{2}$ 4. _____

5. $y = -3x + 10$ 5. _____

6. $5y = \frac{1}{2}x - 2$ 6. _____

7. $6x = 14 - 2y$ 7. _____

8. $\frac{3}{5}x + 2 = \frac{1}{2}y + 6$ 8. _____

9. $7 - 2y = 6 - 2x$ 9. _____

10. $\frac{1}{3}y + 5 = 4 - x$ 10. _____