

+/- $\cdot$ $\div$ $\sqrt{}$

- Solving Equations - apply inverse operations to both sides

$$\begin{array}{r}
 x + 5 = 9 \\
 \downarrow -5 \quad -5 \\
 \hline
 x = 4
 \end{array}$$

check: $4 + 5 = 9 \checkmark$

$$\begin{array}{r}
 2x - 6 = -4 \\
 \downarrow +6 \quad +6 \\
 \hline
 2x = 2 \\
 \downarrow \div 2 \quad \div 2 \\
 \hline
 x = 1
 \end{array}$$

check: $2 \cdot 1 - 6 = -4 \checkmark$

$$\begin{array}{r}
 3(2x - 4) + 2x = 12 \\
 \downarrow \quad \downarrow \\
 6x - 12 + 2x = 12 \\
 \downarrow +12 \quad \downarrow +12 \\
 \hline
 6x + 2x = 24 \\
 \downarrow \\
 8x = 24 \\
 \downarrow \div 8 \quad \div 8 \\
 \hline
 x = 3
 \end{array}$$

check: $3(2 \cdot 3 - 4) + 2 \cdot 3 = 12$

- Isolating Variables

Solve for y

$$\begin{array}{r}
 3x + 6y = 18 \\
 \downarrow -3x \quad -3x \\
 \hline
 6y = 18 - 3x \\
 \downarrow \div 6 \quad \div 6 \\
 \hline
 y = 3 - \frac{1}{2}x
 \end{array}$$

Solve for x

$$\begin{array}{r}
 3x + 6y = 18 \\
 \downarrow -6y \quad -6y \\
 \hline
 3x = 18 - 6y \\
 \downarrow \div 3 \quad \div 3 \\
 \hline
 x = 6 - 2y
 \end{array}$$