

explain-math example

Matthew Gleich

## 0.1 Basic Math Example

$$\begin{array}{l}
 \text{Statement} :: \Downarrow \{ -2(x+2) = 6 \\
 \text{Distribute out -2} :: \Downarrow \left\{ \begin{array}{l} (-2 \cdot x) + (-2 \cdot 2) = 6 \\ -2x - 4 = 6 \end{array} \right. \\
 \text{Remove -4 from the left} :: \Downarrow \left\{ \begin{array}{l} -2x - 4 + 4 = 6 + 4 \\ -2x = 10 \end{array} \right. \\
 \text{Remove -2 from the left} :: \Downarrow \left\{ \begin{array}{l} \frac{-2x}{-2} = \frac{10}{-2} \\ \frac{-2x}{-2} = \frac{10}{-2} \\ x = -5 \end{array} \right. \\
 \searrow \\
 \text{sol:} \\
 \boxed{x = -5}
 \end{array}$$

## 0.2 Basic Physics Example

$$\begin{array}{l}
 \text{Formula} :: \Downarrow \{ p = mv \\
 \text{Variables} :: \Downarrow \left\{ \begin{array}{l} p = ? \text{ kg } \frac{\text{m}}{\text{s}} \\ m = 3.0 \text{ k.g} \\ v = 5.0 \text{ m/s East} \end{array} \right. \\
 \text{Plug \& solve} :: \Downarrow \{ p = 3 \cdot 5 \\
 \searrow \\
 \text{sol:} \\
 \boxed{p = 15 \text{ kg} \cdot \frac{\text{m}}{\text{s}}}
 \end{array}$$