

explain-math example

Matthew Gleich

0.1 Basic Math Example

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

\Downarrow
sol.

$$x = -5$$

0.2 Basic Physics Example

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

\Downarrow
sol.

$$p = 15 \text{ kg} \cdot \frac{\text{m}}{\text{s}}$$