

M8 - 10.3 - " $\frac{a}{x} = b$ " " $\frac{a}{bx} = c$ " Notes

Solve for x

$$\frac{8}{x} = 4$$

$$x \times \frac{8}{x} = 4 \times x$$

Multiply x to both sides

Multiply both sides by the denominator

~~$$x \times \frac{8}{x} = 4 \times x$$~~

Cross it off

$$8 = 4x$$

~~$$\frac{8}{4} = \frac{4x}{4}$$~~

Divide both sides by 4

$$2 = x$$

Short Form

$$\begin{array}{l} \frac{8}{x} = 4 \\ \frac{8}{8} = x \\ \frac{4}{4} = x \\ x = 2 \end{array}$$

Check Answer

$$\begin{array}{l} \frac{8}{x} = 4 \\ \frac{8}{8} = 4 \\ \frac{8}{2} = 4 \\ 4 = 4 \quad \checkmark \end{array}$$

Solve for x

$$\frac{24}{2x} = 3$$

~~$$2x \times \frac{24}{2x} = 3 \times 2x$$~~

Multiply $2x$ to both sides

$$24 = 6x$$

~~$$\frac{24}{6} = \frac{6x}{6}$$~~

Divide both sides by 6

$$4 = x$$

Short Form

$$\begin{array}{l} \frac{24}{2x} = 3 \\ \frac{24}{24} = x \\ \frac{2(3)}{2(3)} = x \\ x = 4 \end{array}$$

Check Answer

$$\begin{array}{l} \frac{24}{2x} = 3 \\ \frac{24}{24} = 3 \\ \frac{2(4)}{2(4)} = 3 \\ \frac{24}{8} = 3 \\ 3 = 3 \quad \checkmark \end{array}$$