

5.3 Writing Proportions

EQ: How can you write a proportion that solves a problem in real-life?

	Last Month	This Month
Purchase	2 ringtones	3 ringtones
Total Cost	6 dollars	x dollars

*Units matter! We are comparing two things.
2 ways to set up proportions:

① Using columns.

$$\begin{array}{c} \times 3 \\ \downarrow \end{array} \frac{2 \text{ ringtones}}{6 \text{ dollars}} = \begin{array}{c} \times 3 \\ \downarrow \end{array} \frac{3 \text{ ringtones}}{x \text{ dollars}} \quad x=9$$

← numerators have the same units
↘ denominators have the same units

② Using rows

$$\frac{2 \text{ ringtones}}{3 \text{ ringtones}} = \frac{6 \text{ dollars}}{x \text{ dollars}} \quad x=9$$

Solve the proportion using mental math.

$$\frac{3}{2} = \frac{x}{8} \quad \boxed{x=12}$$