

10/2/18

Intro to Proportions

Proportions are comparisons of ratios

$$\frac{1}{2} = \frac{2}{4}$$

$$2 \cdot 2 = 1 \cdot 4$$

$$4 = 4$$

Cross products
are always
equal in a
proportion.

$$\frac{2}{3} = \frac{18}{27}$$

yes
 $54 = 54$

$$\frac{4}{8} = \frac{25}{50}$$

Proportions?
 $200 = 200$
yes

$$\frac{12}{8} = \frac{8}{12}$$

no

$$64 \neq 144$$

$$\frac{6}{18} = \frac{11}{15}$$

$90 \neq 198$
no

$$\frac{12}{8} = \frac{x}{6}$$

$$\frac{72}{8} = \frac{8x}{8}$$

$$9 = x$$

~~$$\frac{10}{7+x} = \frac{20}{24.5}$$~~

$$20(7+x) = 245$$

$$140 + 20x = 245$$
$$\begin{array}{r} 140 + 20x = 245 \\ -140 \quad \quad -140 \\ \hline \end{array}$$

$$\frac{20x}{20} = \frac{105}{20}$$

$$x = 5.25$$

