Identifying

and

Solving Proportions

Proportion: an equation stating that two ratios are equivalent.

$$\frac{a}{b} = \frac{c}{d}$$

How to determine if ratios are proportional: simplify both ratios and see if they are equal

Examples: $\frac{2}{7}$ and $\frac{6}{21}$ $\div 3$

$\frac{2}{7}$ $\frac{2}{7}$ Yes

$\frac{8}{24}$ and $\frac{6}{20}$

$\frac{1}{3}$ $\frac{3}{10}$ NO

Solving Proportions: you can solve for a missing part of a proportion, if you know the other 3 parts

Examples: $\frac{x}{9} = \frac{7}{12}$

$12x = 9 \cdot 7$

$\frac{12x}{12} = \frac{63}{12}$

$x = 5.25$

*multiply the numbers on the diagonals to set up the equation.

EX ② $\frac{7}{9} = \frac{j}{22.5}$

$\frac{9j}{9} = \frac{157.5}{9}$

$j = 17.5$