

Algebra Review Solving Proportions

<p>If $\frac{a}{b} = \frac{c}{d}$ then</p> <p style="text-align: center;">$a \cdot d = b \cdot c$</p>	<p>Check: $\frac{2}{3} = \frac{4}{6}$</p>	<p>Solve: $\frac{x}{8} = \frac{9}{12}$</p>	<p>Solve: $\frac{5}{x+3} = \frac{2}{5}$</p>
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Core Concept Similar Polygons

Definition: Similar Figures: Two figures are _____ if they have the same _____ but different _____.

Similarity Postulate: Two polygons are similar if and only if ...

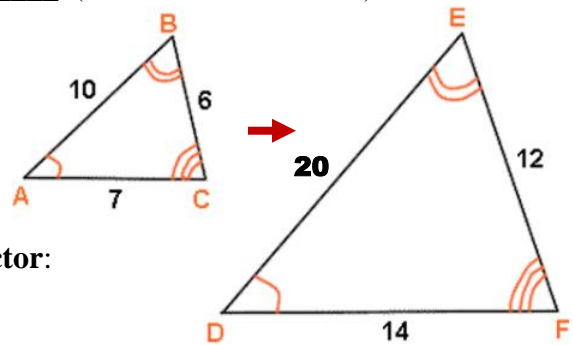
- Corresponding _____ are _____.
- Corresponding _____ are _____ (same ratio)

Similarity Statements: $\triangle \text{_____} \sim \triangle \text{_____}$ (the order of letters matters)

Angles: $\angle A \cong \angle D$, _____, _____

Sides: $\frac{DE}{AB} = \frac{\text{_____}}{\text{_____}} = \frac{\text{_____}}{\text{_____}}$

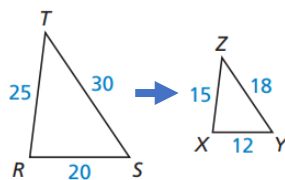
Scale Factor:



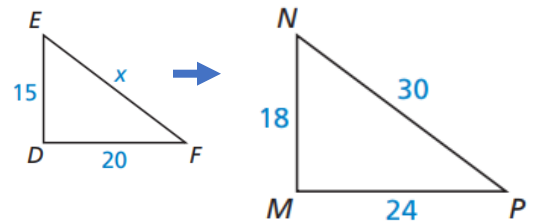
Examples:

In the diagram, $\triangle RST \sim \triangle XYZ$.

- Find the scale factor from $\triangle RST$ to $\triangle XYZ$.
- List all pairs of congruent angles.
- Write the ratios of the corresponding side lengths in a *statement of proportionality*.



$\triangle DEF \sim \triangle MNP$. Find the value of x .



Scale Factor: