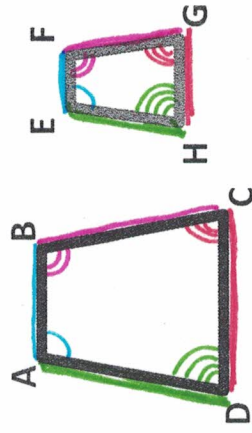


Similar Figures and Triangles (p.1)

Properties of Similar Figures:

- Have the same shape but are different in size
- Two figures are similar if their vertices are paired so that
 - corresponding angles are congruent
 - corresponding sides are in proportion
 - their lengths have the same ratio.



Proportional Sides

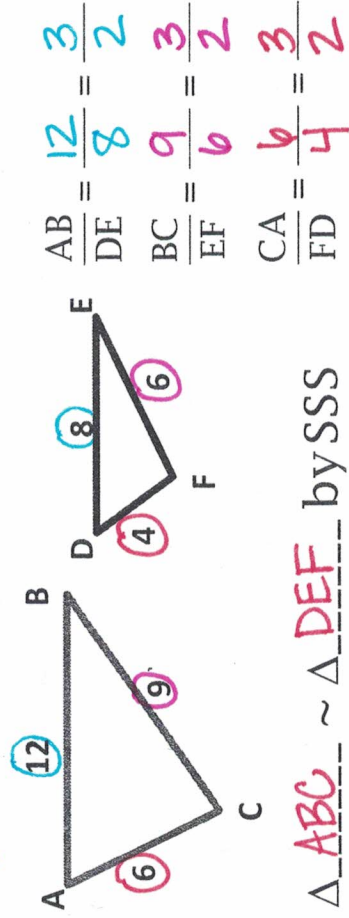
$$\frac{AB}{EF} = \frac{BC}{FG} = \frac{CD}{GH} = \frac{DA}{HE}$$

Corresponding Congruent Angles

$$\begin{aligned} \angle A &\cong \angle E \\ \angle B &\cong \angle F \\ \angle C &\cong \angle G \\ \angle D &\cong \angle H \end{aligned}$$

Side-Side-Side (SSS)

- If the sides of two triangles are in proportion then the triangles are similar.

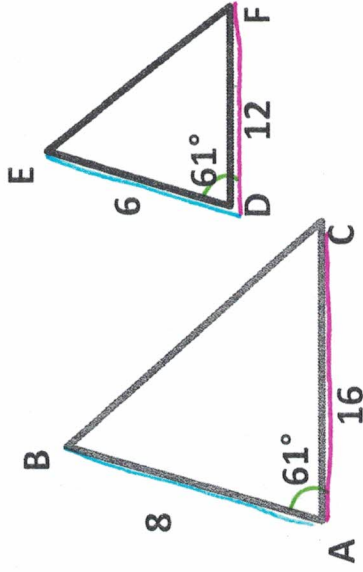


$$\triangle ABC \sim \triangle DEF \text{ by SSS}$$

Similar Figures and Triangles (p.2)

Side - Angle - Side (SAS):

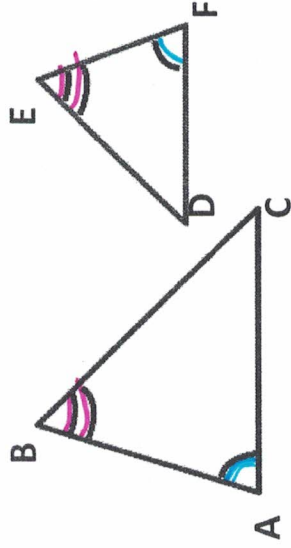
- If an angle of one triangle is congruent to an angle of another triangle and the sides including those angles are in proportion, then the triangles are similar.



$$\triangle ABC \sim \triangle DEF \text{ by SAS}$$

Angle - Angle (AA):

- If two angles of one triangle are congruent to two angles of another triangle, then the triangles are similar.



$$\triangle ABC \sim \triangle DEF \text{ by AA}$$