

## 10.1 Similar and Congruent Figures Extra Practice

Fill in the blank with the appropriate word, phrase, or symbol to make a true statement.

- Similar figures have the same angle measures but not the same side lengths.
- The symbol ~ means "is similar to" and the symbol ∠ is the abbreviation for the word angle.
- A scale drawing is an enlarged or reduced drawing that is similar to an actual object or place.
- In similar triangles, corresponding angles are congruent and corresponding sides are in proportion.

10.1 I can identify the corresponding parts of similar figures.

Name the corresponding angles and corresponding sides:

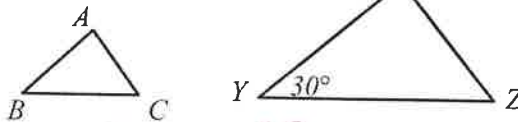
1.  $\triangle ABC \sim \triangle XYZ$

$$\angle A \cong \angle X$$

$$\angle B \cong \angle Y$$

$$\angle C \cong \angle Z$$

$$\frac{AB}{XY} = \frac{BC}{YZ} = \frac{AC}{XZ}$$

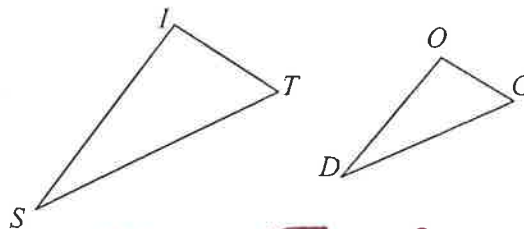


2.  $\triangle SIT \sim \triangle DOG$

$$\angle S \cong \angle D$$

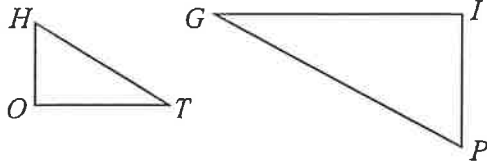
$$\angle I \cong \angle O$$

$$\angle T \cong \angle G$$



$$\frac{SI}{DO} = \frac{IT}{OG} = \frac{ST}{DG}$$

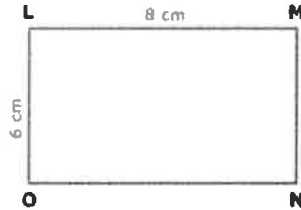
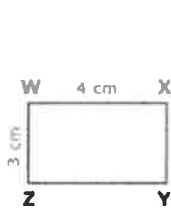
3.  $\triangle HOT \sim \triangle PIG$



$$\begin{aligned} \angle H &\cong \angle I \\ \angle O &\cong \angle G \\ \angle T &\cong \angle P \end{aligned} \quad \frac{HO}{PI} = \frac{OT}{IG} = \frac{HT}{PG}$$

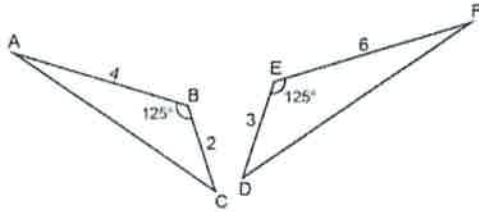
10.1 I can write a ratio of corresponding sides.

4.



$$\begin{aligned} \frac{4}{8} &= \frac{1}{2} \\ \frac{3}{6} &= \frac{1}{2} \end{aligned} \quad \frac{1}{2}$$

5.



$$\begin{aligned} \frac{4}{6} &= \frac{2}{3} \\ \frac{2}{3} & \end{aligned} \quad \frac{2}{3}$$

10.1 I can find the missing angle measures and side lengths of congruent figures.

$\triangle BDC \cong \triangle RQP$

6.  $QR = 96 \text{ yd}$

7.  $DC = 81 \text{ yd}$

8.  $BC = 50 \text{ yd}$

9.  $m\angle D = 32^\circ$

10.  $m\angle R = 58^\circ$

