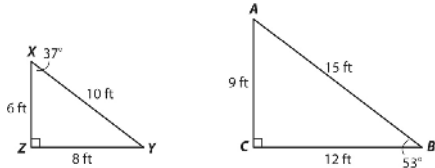


LESSON
4-1

Similar Shapes and Proportions

Reteach

Figures that have the same shape but not the same size are **similar figures**. In similar figures, the ratio of the lengths of the corresponding sides are proportional, and the corresponding angles have equal measures.



To determine if $\triangle ABC$ is similar to $\triangle XYZ$, you can write a proportion for each pair of corresponding sides.

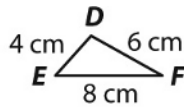
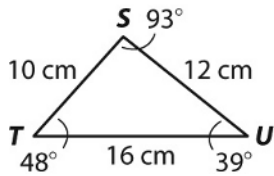
longest sides	middle sides	shortest sides
$\frac{AB}{XY} = \frac{15}{10} = \frac{3}{2}$	$\frac{BC}{YZ} = \frac{12}{8} = \frac{3}{2}$	$\frac{AC}{XZ} = \frac{9}{6} = \frac{3}{2}$

The corresponding sides are always in the ratio $\frac{3}{2}$. So the triangles are similar.

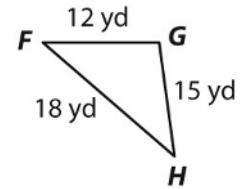
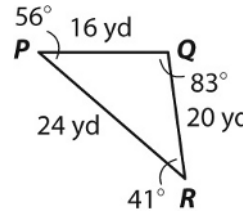
In the figures, corresponding angles have equal measures.

Tell whether the shapes are similar. Explain your answer.

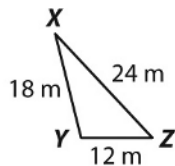
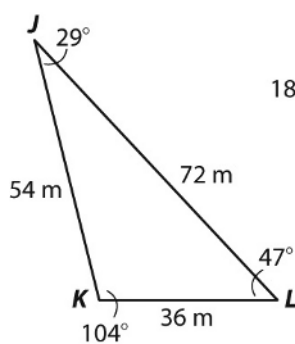
1.



2.



3.



4.

