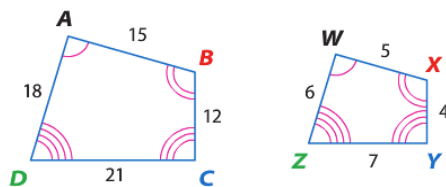


7-2**Similar Polygons****Similar Polygons**

Two figures that have the same shape AND same angle measures.

Side lengths MUST be proportional

Example In the diagram below, $ABCD$ is similar to $WXYZ$.



Symbols $ABCD \sim WXYZ$

Corresponding angles

$\angle A \cong \angle W$, $\angle B \cong \angle X$, $\angle C \cong \angle Y$,
and $\angle D \cong \angle Z$

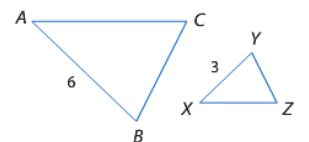
Corresponding sides

$$\frac{AB}{WX} = \frac{BC}{XY} = \frac{CD}{YZ} = \frac{DA}{ZW} = \frac{3}{1}$$

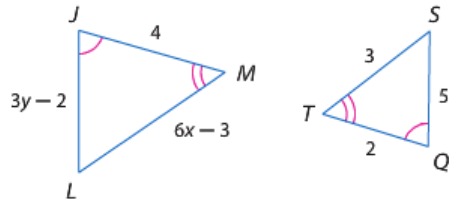
Scale Factor

The reduced ratio, of corresponding sides, in similar figures

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



Find the value of each variable if
 $\triangle JLM \sim \triangle QST$. Hint: (If possible, identify the scale factor first)



Perimeters of Similar Polygons

Perimeters also have the same scale factor as any two corresponding sides in Similar Polygons

EXAMPLE:

Check to see what the scale factor is for each side by plugging your solutions back in. THEN check to see if the Perimeters are similar.

