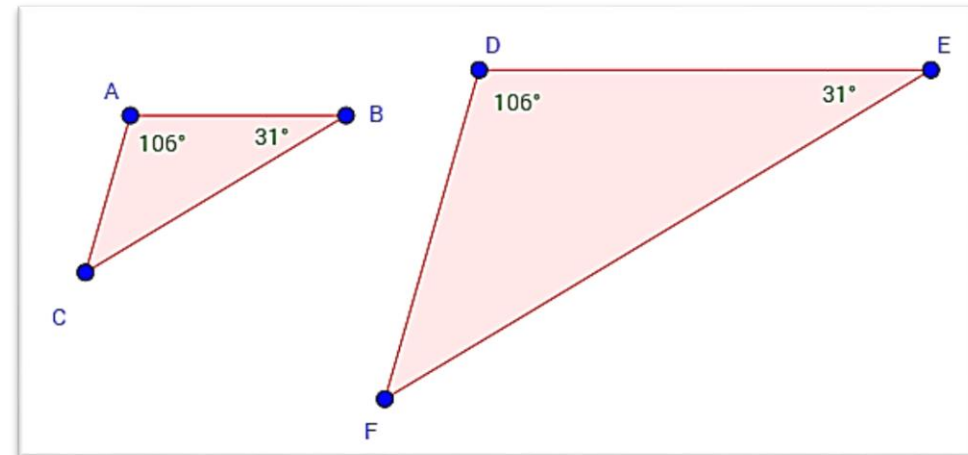


Proving Triangle Similarity by AA

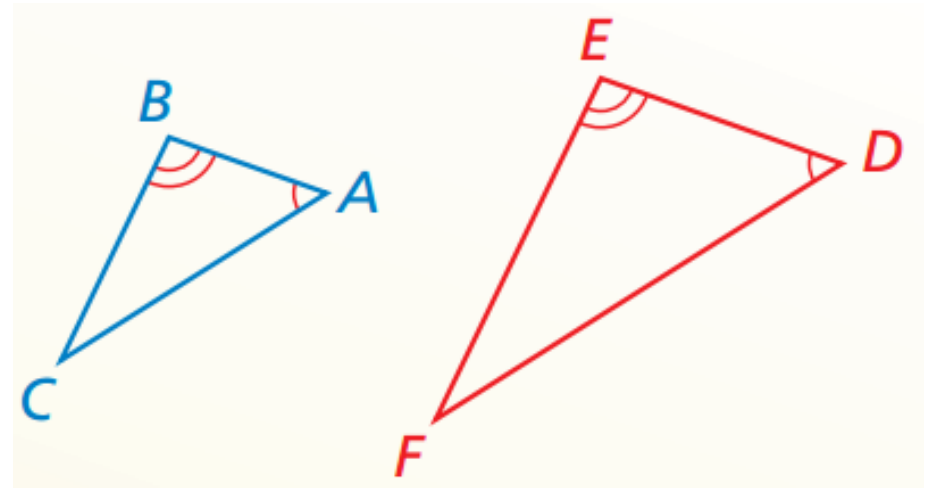
Lesson 8.2



Angle-Angle (AA) Similarity Theorem

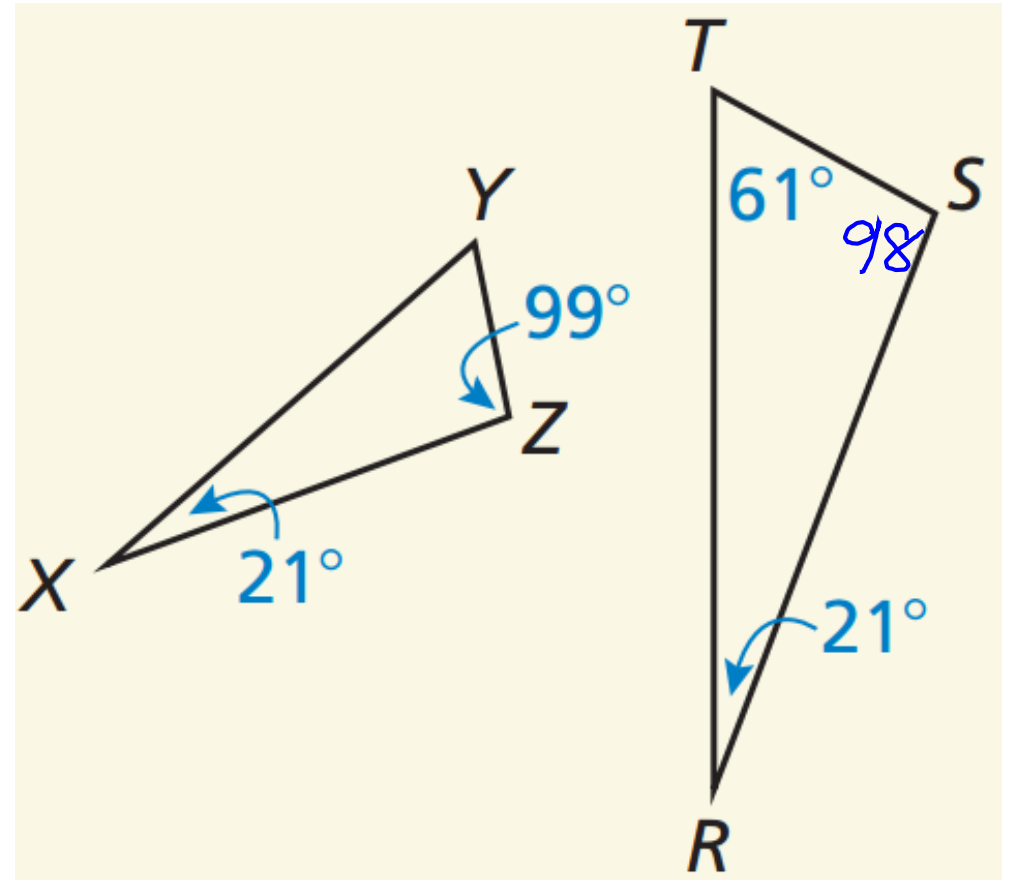
If two angles of one triangle are congruent to two angles of another triangle, then the two triangles are similar.

If $\angle A \cong \angle D$ and $\angle B \cong \angle E$, then $\triangle ABC \sim \triangle DEF$.

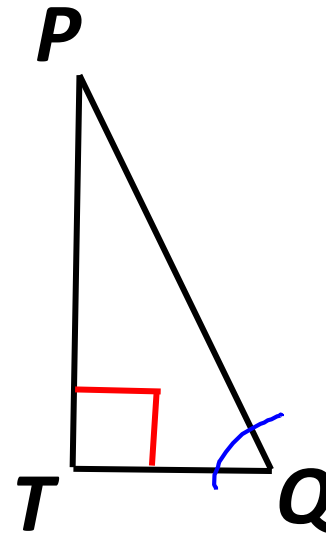
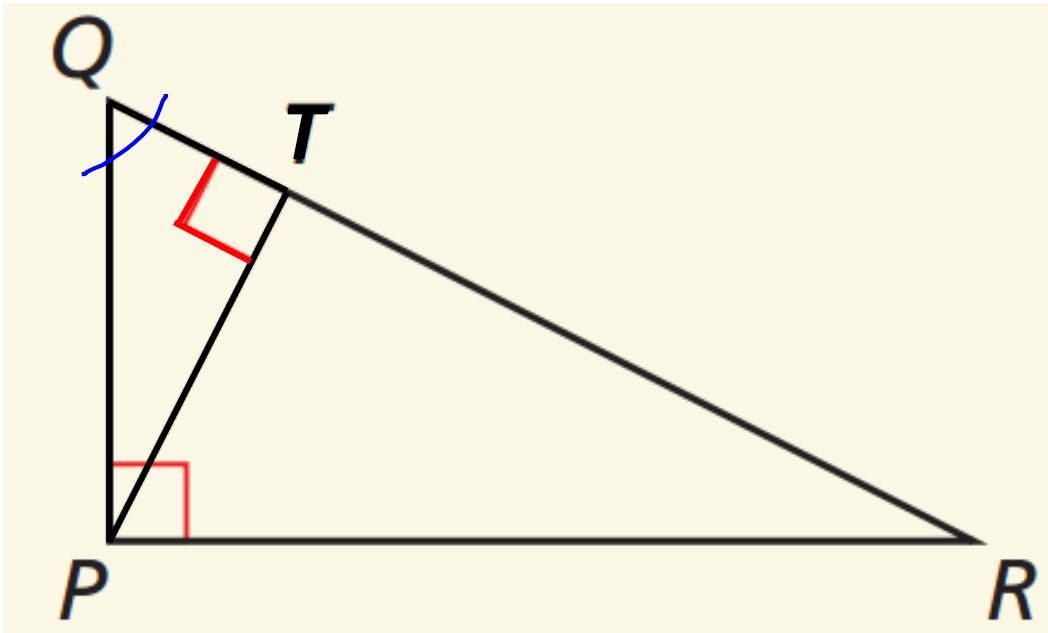


Determine whether the triangles are similar. If they are, write a similarity statement. Explain your reasoning.

no because
only one pair of $\angle s \cong$

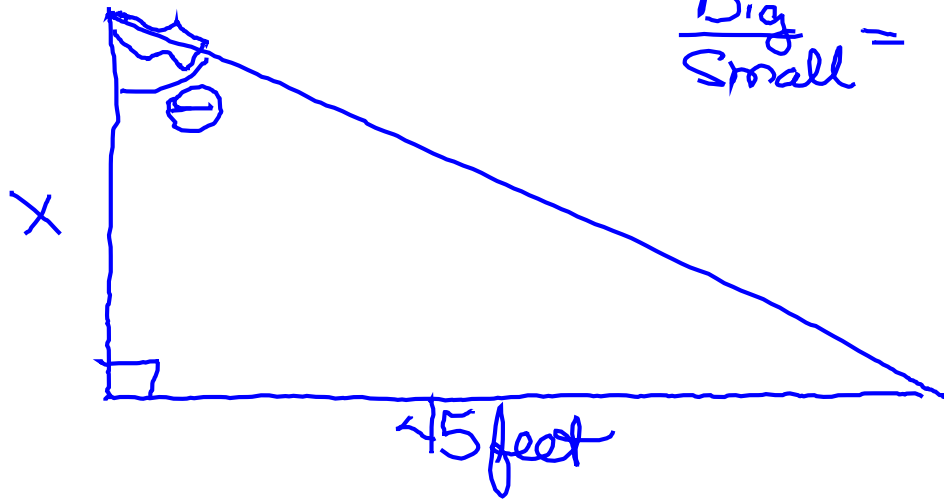


Show that $\triangle QPR \sim \triangle QTP$.



$$\begin{aligned}\angle QPR &\cong \angle PTQ \\ \angle Q &\cong \angle Q\end{aligned}$$

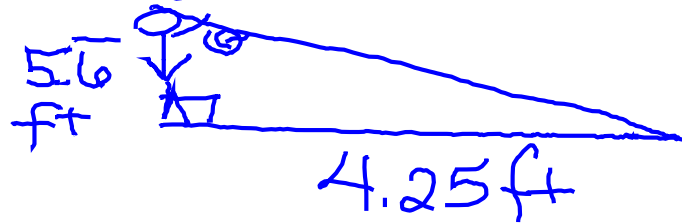
A school flagpole casts a shadow that is 45 feet long. At the same time, a boy who is five feet eight inches tall casts a shadow that is 51 inches long. How tall is the flagpole to the nearest foot?



$$\frac{\text{big}}{\text{small}} = \frac{x}{5.6} = \frac{45}{4.25}$$

$$4.25x = 252$$

$$x = 59.29 \text{ ft}$$



$$\frac{5 \text{ feet } 8 \text{ in}}{12 \text{ in}}$$

$$4 \text{ ft } \frac{3 \text{ in}}{12}$$

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