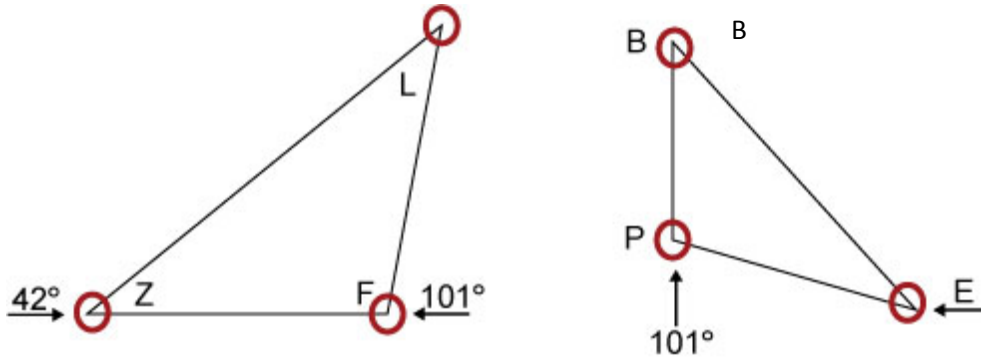


Geometry
Unit: Similarity
Section: Similar Triangles

Review Worksheet Key

1) Make a statement about the triangles' similarity and support it with a postulate.



$$m\angle L = 180 - m\angle Z - m\angle F$$

$$m\angle L = 180 - 42 - 101 = 37^\circ$$

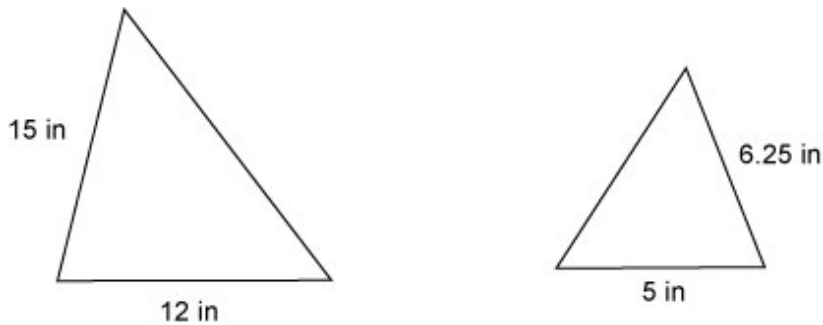
$$m\angle Z = m\angle P$$

$$m\angle L = m\angle E$$

$$\triangle ZLF \sim \triangle PEB$$

By the Angle-Angle Similarity Postulate

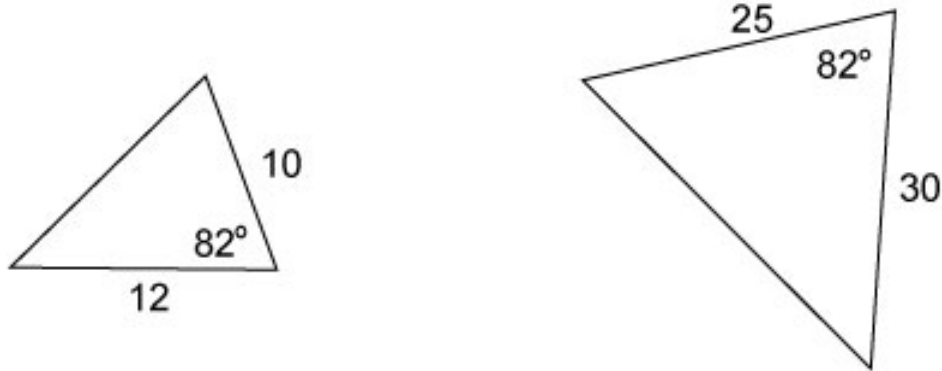
2) Make a statement about the triangles' similarity and support it with a postulate.



Although it is true that the two sides given are proportional, $\frac{12}{5} = 2.4$ and $\frac{15}{6.25} = 2.4$, it is not shown that

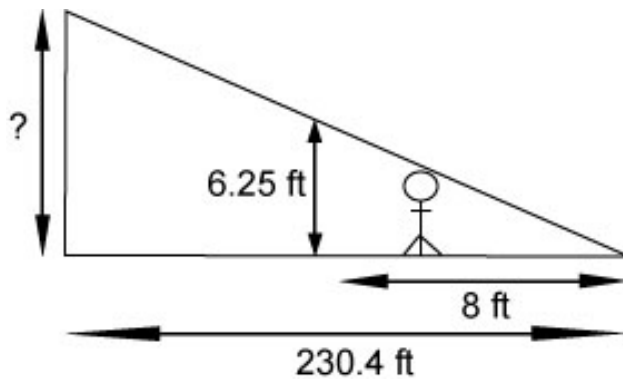
the third sides are proportional, therefore the Side-Side-Side Similarity Postulate cannot be used. These are not necessarily similar triangles.

3) Make a statement about the triangles' similarity and support it with a postulate.



$\frac{12}{30} = 0.4$ and $\frac{10}{25} = 0.4$ and the included angle in each triangle is equal to 82°, therefore by the Side-Angle-Side Similarity Postulate, the triangles are similar.

4) A 6.25 ft tall man is standing by a building. The man's shadow is 8 ft long and the building's shadow is 230.4 ft. How tall is the building?



$$\frac{x}{6.25} = \frac{230.4}{8}$$
$$8x = 6.25(230.4)$$
$$8x = 1440$$
$$x = 180$$

The building is 180 feet tall.