

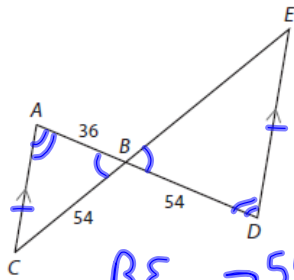
## 11.4 AA Similarity of Triangles

Use the properties of similarity transformations to establish the AA criterion for 2 triangles to be similar

Angle-Angle (AA) Triangle Similarity  
Theorem- if 2 angles of 1 triangle are congruent to 2 angles of another triangle, then the 2 triangles are similar by AA.

Find the indicated length, if possible.

A. BE

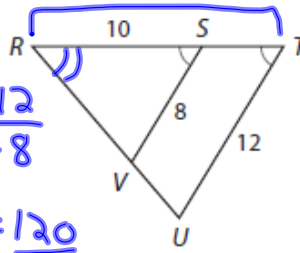


$$\frac{BE}{54} = \frac{54}{36}$$

$$\frac{36BE}{36} = \frac{2,916}{36}$$

$$BE = 81$$

B. RT



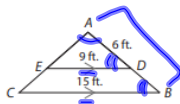
$$\frac{RT}{10} = \frac{12}{8}$$

$$\frac{8RT}{8} = \frac{120}{8}$$

$$RT = 15$$

Your Turn

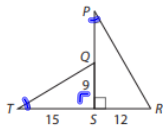
6. A builder was given a design plan for a triangular roof as shown. Explain how he knows that  $\triangle AED \sim \triangle ACB$ . Then find AB.



$$\frac{AB}{6} = \frac{15}{9}$$

$$\frac{9AB}{9} = \frac{90}{9} \quad AB = 10$$

7. Find PQ, if possible.



$$\frac{PQ+9}{15} = \frac{12}{9}$$

$$9(PQ+9) = 15(12)$$

$$9PQ+81 = 180$$

$$-81 \quad -81$$

$$\frac{9PQ}{9} = \frac{99}{9} \quad PQ = 11$$

## Homework

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