Guided Practice
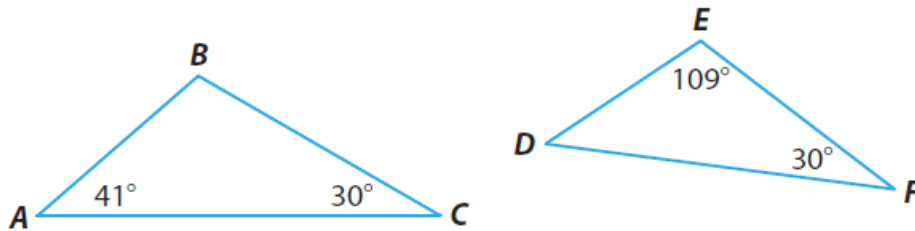
1. Explain whether the triangles are similar. Label the angle measures in the figure. (Explore Activity 1 and Example 1)
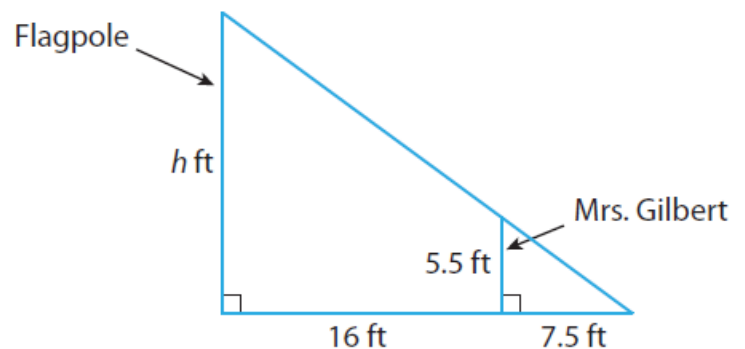

△ABC has angle measures _____ and △DEF has angle

measures _____ . Because _____ in one

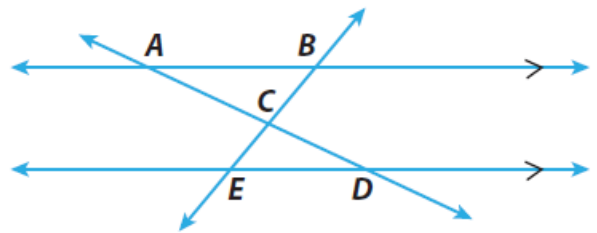triangle are congruent to _____ in the other triangle, the

triangles are _____ .

2. A flagpole casts a shadow 23.5 feet long. At the same time of day, Mrs. Gilbert, who is 5.5 feet tall, casts a shadow that is 7.5 feet long. How tall in feet is the flagpole? Round your answer to the nearest tenth. (Example 2)

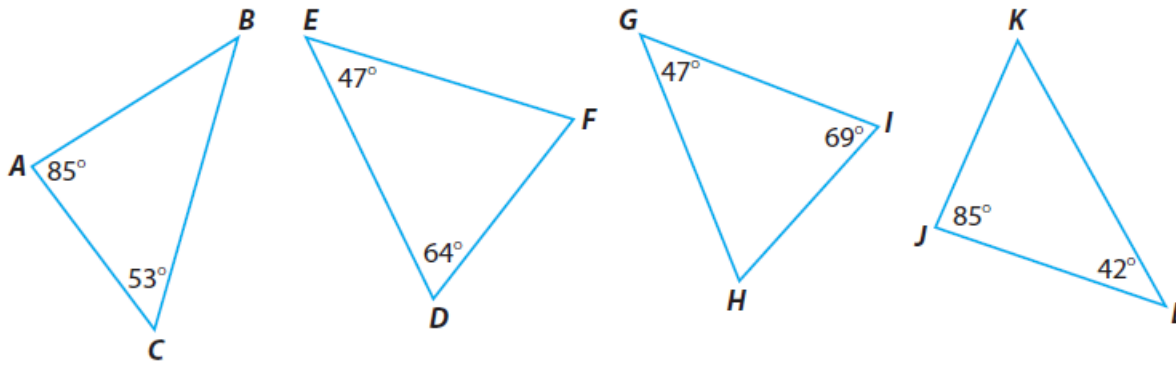$$\frac{5.5}{\boxed{}} = \frac{h}{\boxed{}}$$

$h =$ _____ feet

3. Two transversals intersect two parallel lines as shown. Explain whether △ABC and △DEC are similar. (Example 1)

∠BAC and ∠EDC are _____ since they are _____ .

∠ABC and ∠DEC are _____ since they are _____ .

By _____ , △ABC and △DEC are _____ .

Find the missing angle measures in the triangles.

_____

Which triangles are similar?

_____

Analyze Relationships Determine which angles are congruent to the angles in △ABC.

_____

Multistep A tree casts a shadow that is 20 feet long. Frank is 6 feet tall, and while standing next to the tree he casts a shadow that is 4 feet long.

a. How tall is the tree? _____

b. How much taller is the tree than Frank? _____
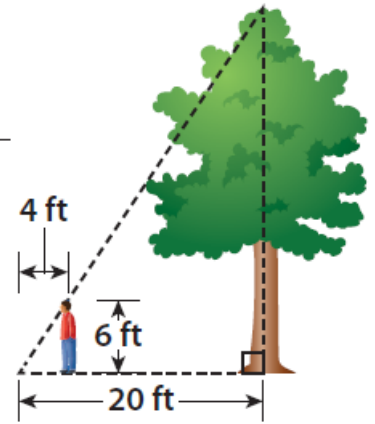
Critique Reasoning Ryan calculated the missing measure in the diagram shown. What was his mistake?

$$\frac{3.4}{6.5} = \frac{h}{19.5}$$

$$19.5 \times \frac{3.4}{6.5} = \frac{h}{19.5} \times 19.5$$

$$\frac{66.3}{6.5} = h$$

$$10.2 \text{ cm} = h$$

_____

_____

_____