

4.3 Proving Triangles are Similar

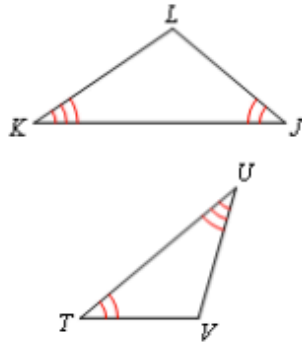
NAME: _____

CORRECTIVE ASSIGNMENT

DATE: _____

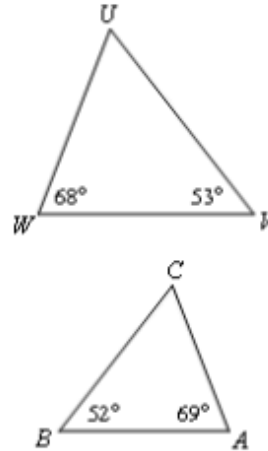
State if the triangles in each pair are similar. If so, state how you know they are similar and complete the similarity statement.

1)



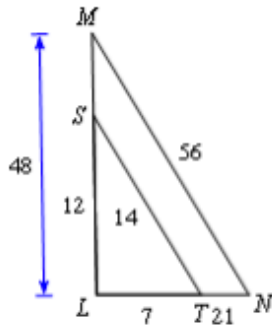
$\Delta JKL \sim$ _____

2)



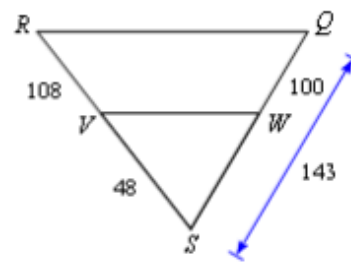
$\Delta WVU \sim$ _____

3)



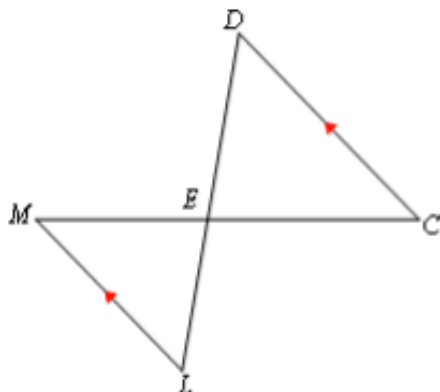
$\Delta LMN \sim$ _____

4)



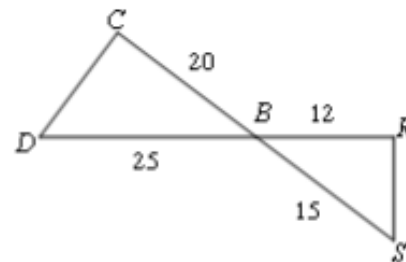
$\Delta SRQ \sim$ _____

5)



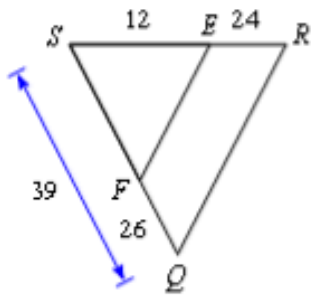
$\Delta EDC \sim$ _____

6)



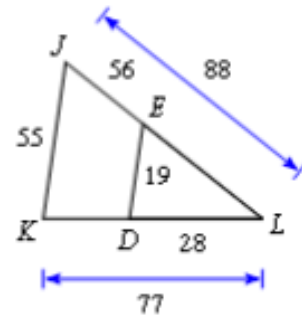
$\Delta BCD \sim$ _____

7)



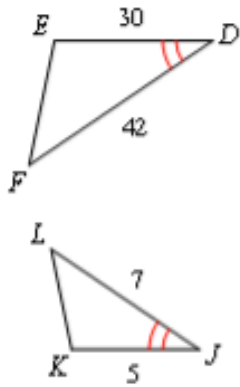
$\triangle SRQ \sim$ _____

8)



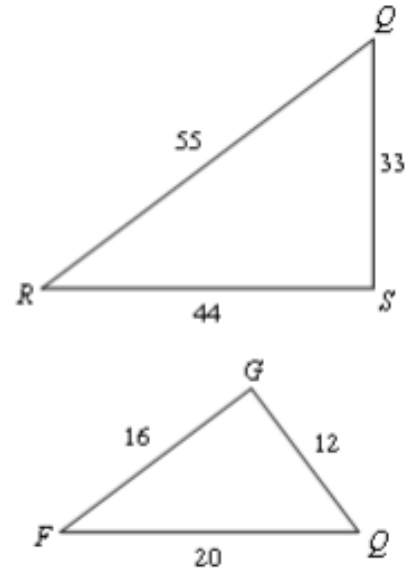
$\triangle LKJ \sim$ _____

9)



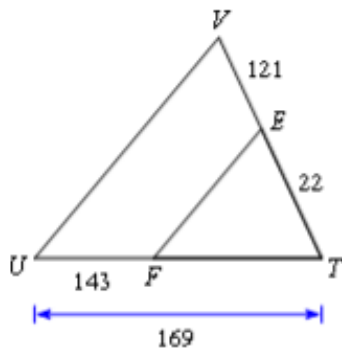
$\triangle DEF \sim$ _____

10)



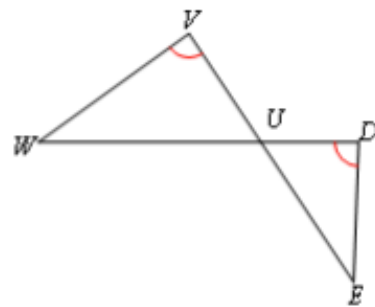
$\triangle QRS \sim$ _____

11)



$\triangle TUV \sim$ _____

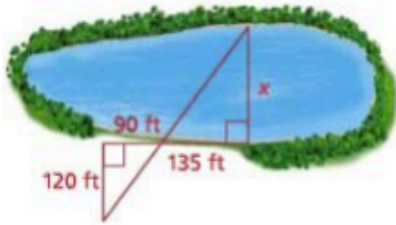
12)



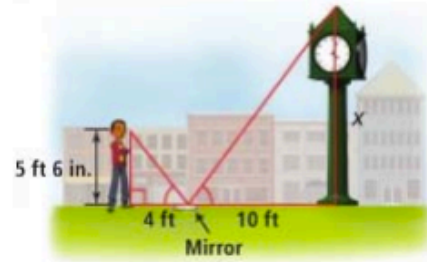
$\triangle UVW \sim$ _____

Explain why the triangles are similar. Then find x .

13.



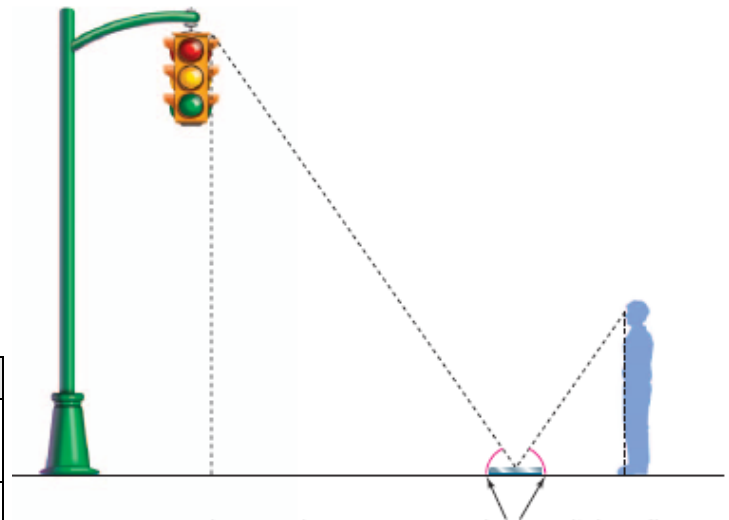
14.



15) Jim wants to find the height of the traffic light.

- a) First, prove that the two triangles are similar.
- Label the two triangles above with points.
 - Use SSS, SAS, or AA to prove triangles are similar.

Statements	Reasons



These angles are congruent because light reflects off a mirror at the same angle it arrives.

b) Use the information below to find the height of the traffic light.

- height from the ground to Jim's eyes: 150 cm
- distance from the middle of the mirror to Jim's feet: 100 cm
- distance from the middle of the mirror to a point directly under the traffic signal: 450 cm

4.3 Proving Triangles are Similar Answer Key

- 1) similar, AA similarity, $\triangle TUV$ 2) not similar 3) similar, SSS similarity, $\triangle LST$
4) not similar 5) similar, AA similarity, $\triangle ELM$ 6) similar, SAS similarity, $\triangle BRS$
7) similar, SAS similarity, $\triangle SEF$ 8) not similar 9) similar, SAS similarity, $\triangle JKL$
10) similar, SSS similarity, $\triangle QFG$ 11) similar, SAS similarity, $\triangle TFE$ 12) similar, AA similarity, $\triangle UDE$