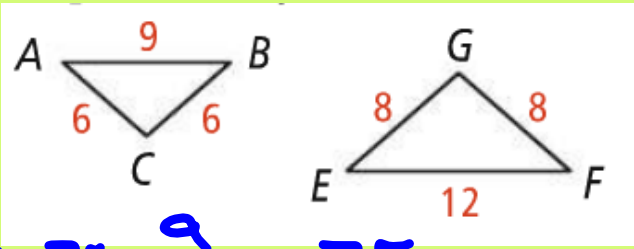
1/22/20 - Warm Up Problem

Is each pair of triangles similar? By SSS, SAS, or AA?

1.

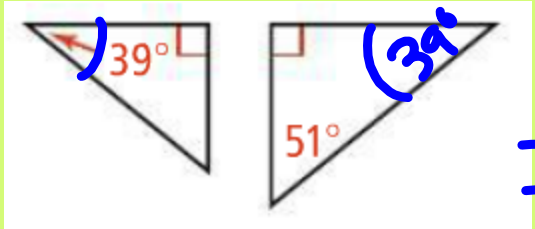


$\frac{6}{8} = .75$ $\frac{9}{12} = .75$

SSS~

SAS

2.

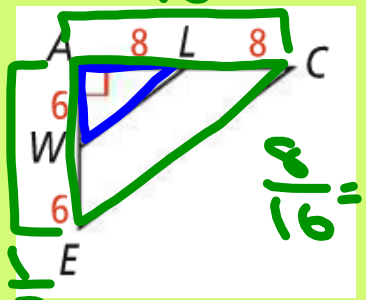


180
−141
39

(39°

AA~

3.



16

12

$\frac{6}{12} = \frac{1}{2}$

$\frac{8}{16} = \frac{1}{2}$

Section 7.3 - Proving Triangles Similar

Goal: Use similar triangles to calculate lengths using indirect measurement

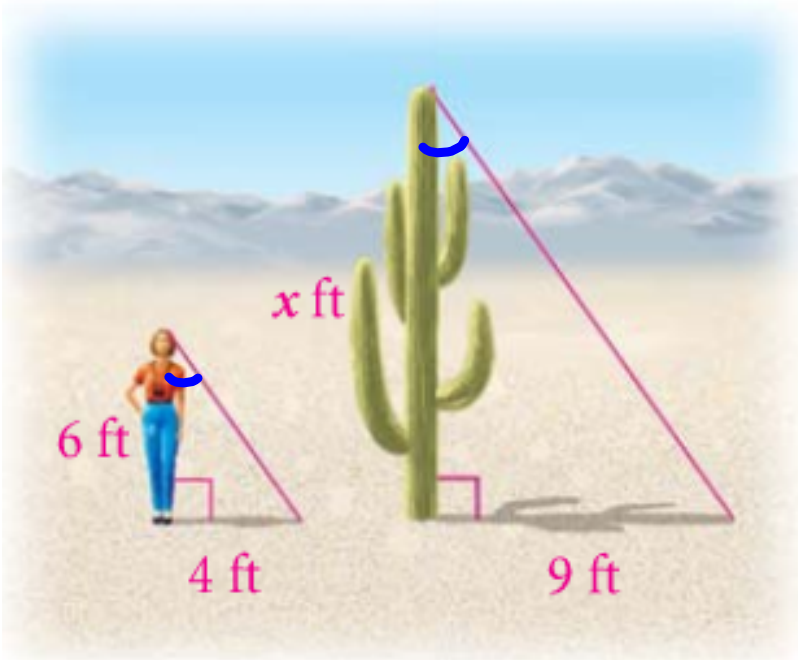
Indirect Measurement

Similar triangles can be used to find heights of tall objects by calculating instead of measuring.

$$\frac{6}{x} = \frac{4}{9}$$

$$\frac{54}{4} = \frac{4x}{4}$$

$$13.5 \text{ ft} = x$$



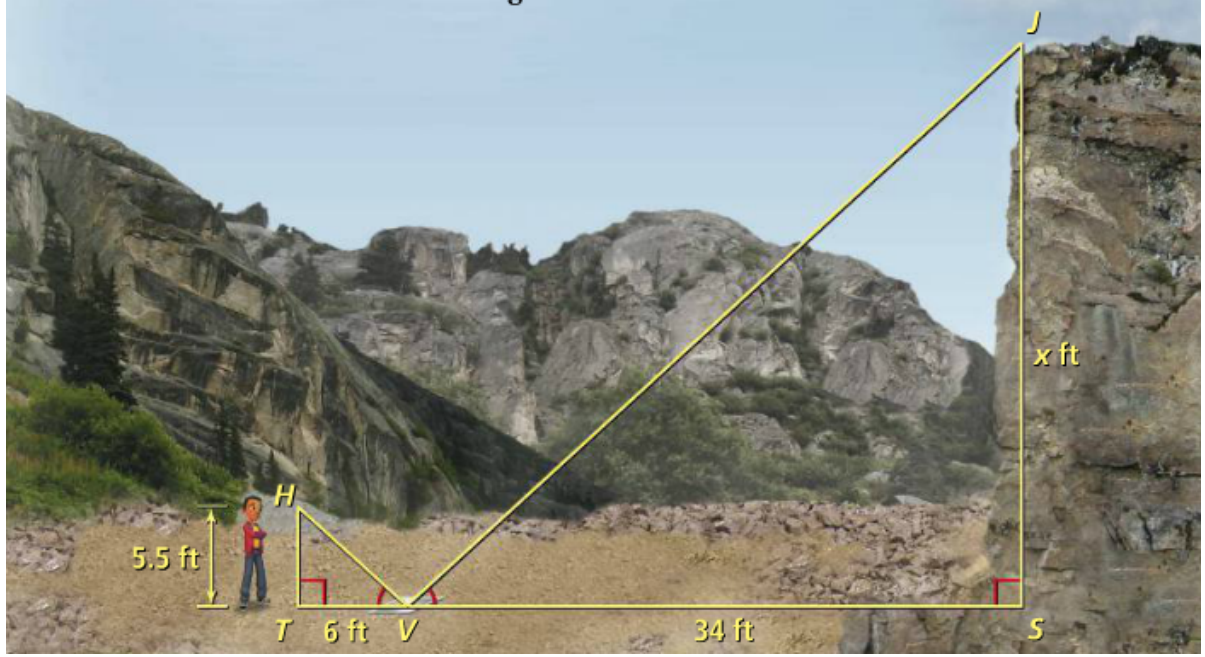
$$\frac{5.5}{x} = \frac{6}{34}$$

$$\frac{187}{6} = \frac{6x}{6}$$

$$31.\overline{16} = x$$

ft

Rock Climbing Before rock climbing, Darius wants to know how high he will climb. He places a mirror on the ground and walks backward until he can see the top of the cliff in the mirror. What is the height of the cliff?



Indirect Measurement Project

Hi