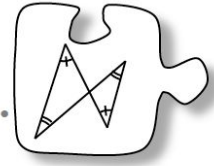


## 2.3.3 What can I do with similar triangles?



### Applying Similarity

#### 2-100

How long is George Washington's Nose? Summarize your team's discussion, and show all of your work for determining the answer. (*Tip: Don't forget to convert inches to feet, and you can assume the picture on p. 123 is a scaled drawing of Mt. Rushmore.*)

How tall is George Washington's face in the diagram?  inches

How tall is George Washington's nose in the diagram?  inches

How tall is George Washington's nose on Mt. Rushmore?  feet

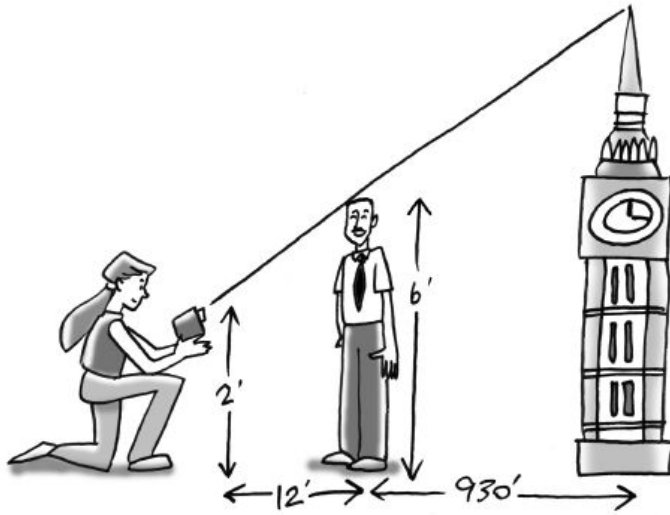
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#### 2-101

YOU ARE GETTING SLEEPY.... Summarize your team's discussion, draw a diagram, and show all of your work.

2-102

Big Ben Photo



- a). Draw in as many triangles as you can see in the picture. Use a different color for each triangle.
- b). Name the triangles and identify triangles that must be similar.

Use the similar triangles to determine the height of Big Ben. Show all of your work.

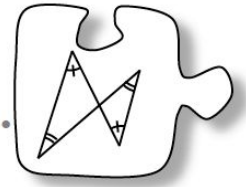
Big Ben's height?  feet

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Explain the difference between  $\cong$  congruence and  $\sim$  similarity?

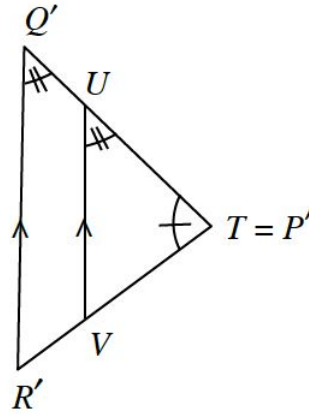
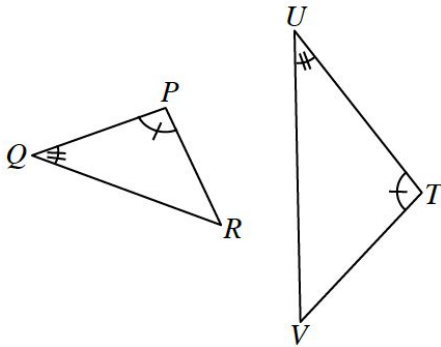
THEOREM GRAPHIC ORGANIZER: You have proved AA $\sim$ , SSS $\sim$ , and SAS $\sim$ . Add these theorems to your Theorem Graphic Organizer.

# 2.3.4 How can I justify it?

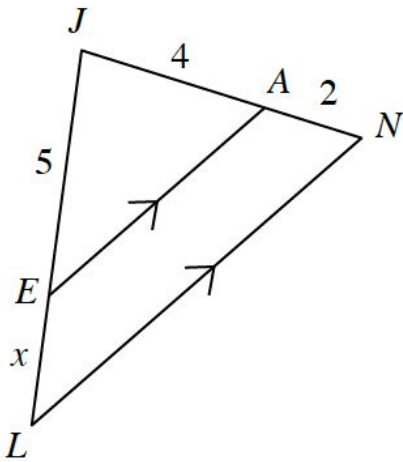


## Similar Triangle Proofs

2-109

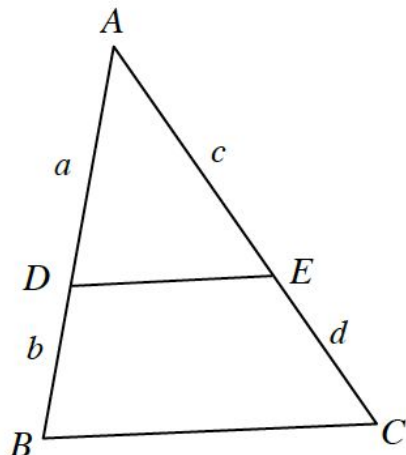


2-110: SIDE SPLITTER



a). Write the equation Kamraan used below. Is this the correct equation? Why or why not? If so, solve for x.

b). Write the equation Janelle used. How did she come up with her equation, and why did she and Kamraan get the same answer?



c - e) . Will this always work? Can you prove it?

**Application Problems:** Solve for each variable in each diagram below. Show your work.

