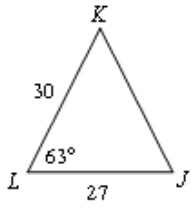
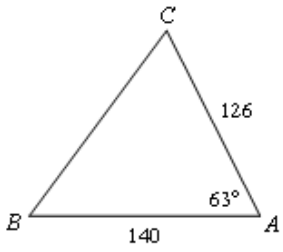


Similarity

The following triangles are similar. Fill in the blank (order is important!). Find the scale factor.

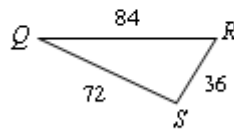
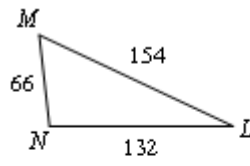
1.



$\triangle ABC \sim$ _____

Scale Factor =

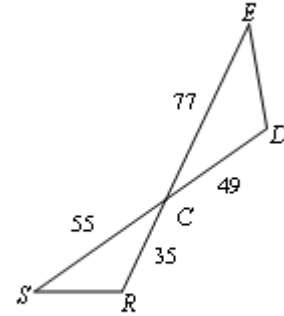
2.



$\triangle LMN \sim$ _____

Scale Factor =

3.

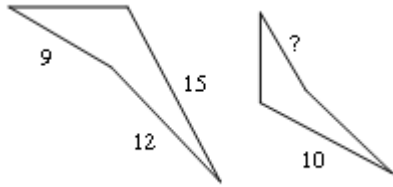


$\triangle CDE \sim$ _____

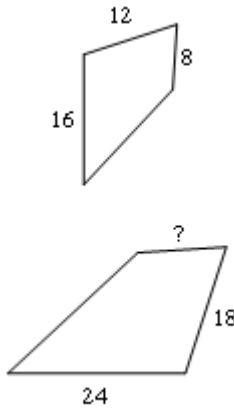
Scale Factor =

The polygons in each pair are similar. Find the missing length.

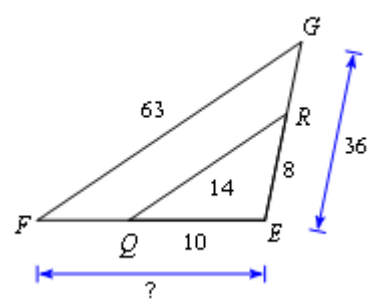
4.



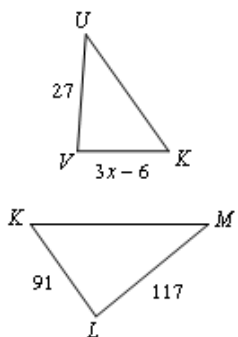
5.



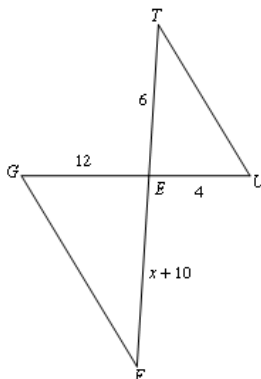
6.



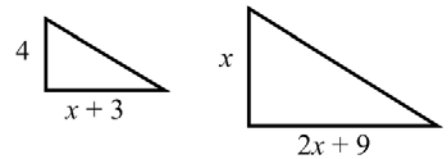
7.



8.

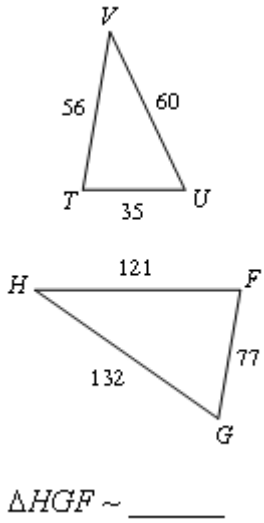


9.

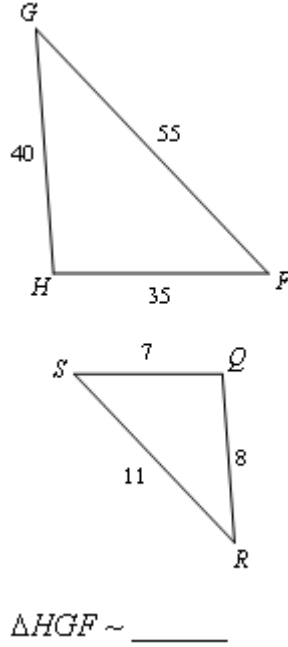


State if the triangles in each pair are similar. If so, state how you know they are similar and complete the similarity statement.

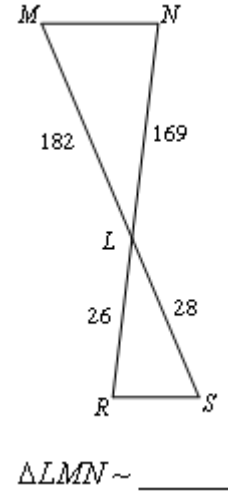
10.



11.

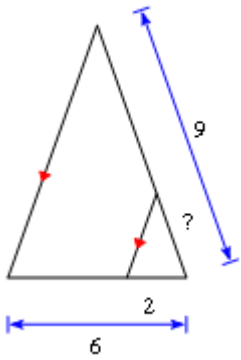


12.

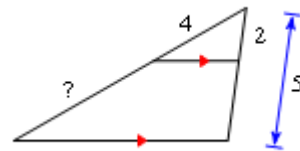


Find the missing length indicated.

13.



14.

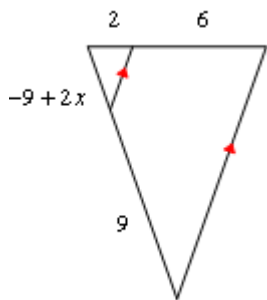


15.

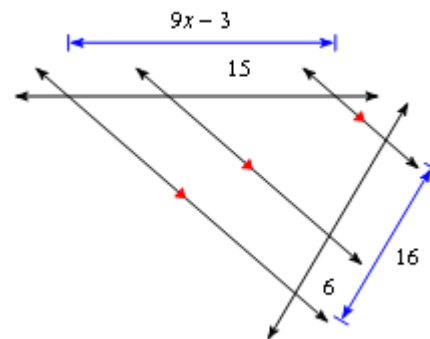


Solve for x .

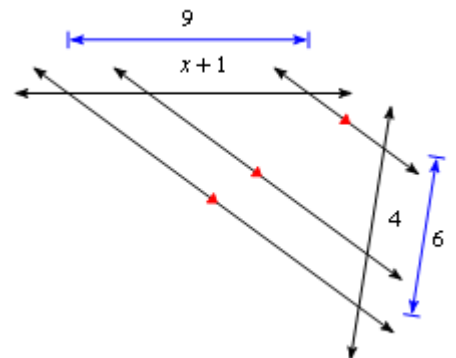
16.



17.

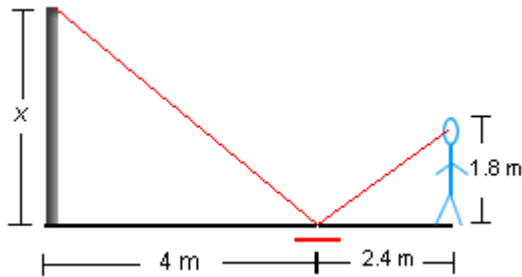


18.

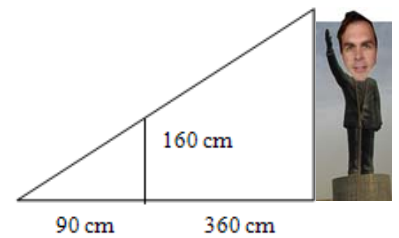


APPLICATIONS

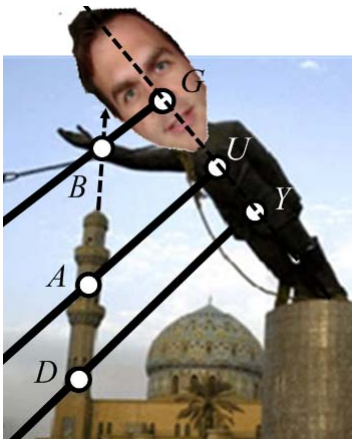
1. Baumholder High School decides to build a statue of Tim Kelly in the front parking lot. Use the information below to determine the unknown height of the statue.



2. Mr. Sullivan doesn't think that the statue is big enough to honor Mr. Kelly so he builds a new statue in his backyard that shines through the night. Mr Sullivan is 160 cm tall, stands 360 cm from the glowing statue at night. Creeper Sully's shadow from the statue is 90 cm long. How high is the new Kelly statue?



3. Baumholder administration quickly realizes that the statue was a bad idea and asks three students to pull it down using ropes. If all three ropes are parallel, $\overline{BG} \parallel \overline{AU} \parallel \overline{DY}$, and $GU = x + 3$, $GY = 16$, $BA = 13.5$, $BD = 21$, then find GU .



4. The head of Mr. Kelly's statue can be intercepted by parallel line segments \overline{AC} and \overline{EY} . Given $FE = 19$, $FC = 12$, $AE = 9$, . Find CY .

