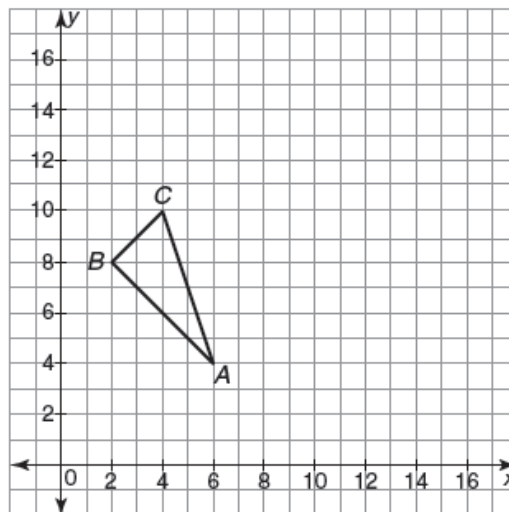


6.REV.3 – End of Chapter Review

1. Draw $\triangle A'B'C'$ by dilating $\triangle ABC$ by a scale factor of $\frac{3}{2}$ using the origin as the center of dilation.

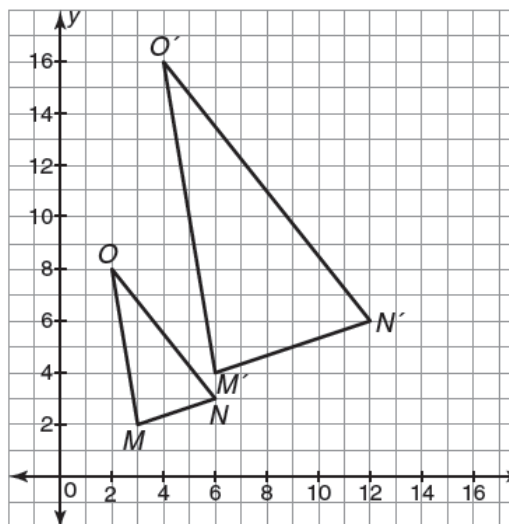
What are the coordinates of $\triangle A'B'C'$?



2. $\triangle M'N'O'$ is a dilation of $\triangle MNO$ with the center of dilation at the origin.

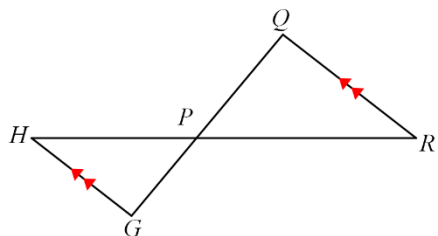
Determine the scale factor, expressed as a fraction in simplest form.

Is the dilation a reduction or an enlargement?



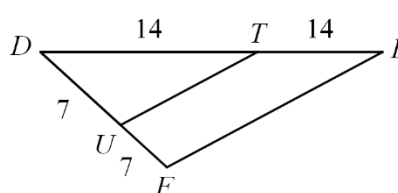
Determine whether the triangles shown are similar and explain your reasoning. If the triangles are similar, identify the similarity theorem – AA, SSS, or SAS – and complete the similarity statement.

3.



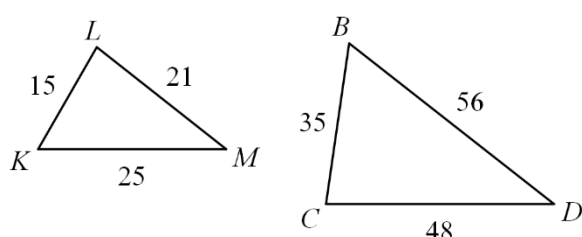
$\triangle HGP \sim$ _____

4.



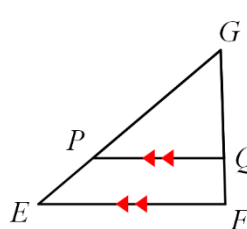
$\triangle DUT \sim$ _____

5.



$\triangle KLM \sim$ _____

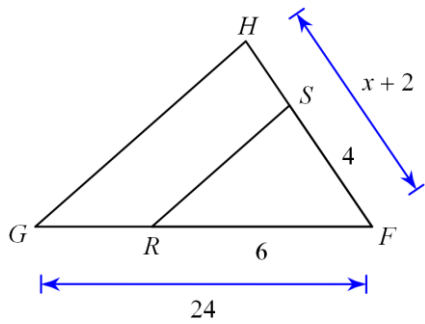
6.



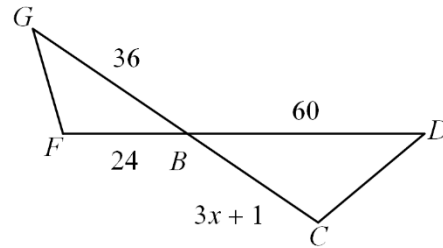
$\triangle EFG \sim$ _____

The triangles shown are similar. Set up and solve a proportion to find the value of x .

7. $\triangle GHF \sim \triangle RSF$



8. $\triangle GBF \sim \triangle DBC$

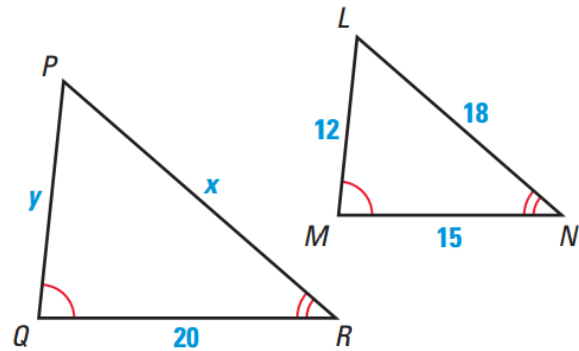


The triangles shown are similar: $\triangle PQR \sim \triangle LMN$, where $\triangle PQR$ is the pre-image. Find the following:

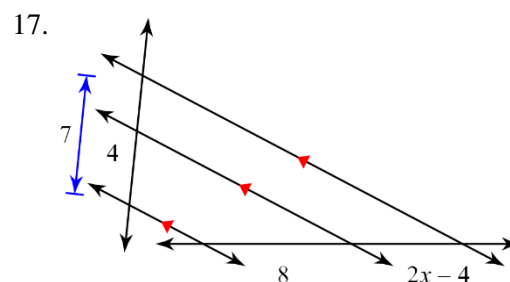
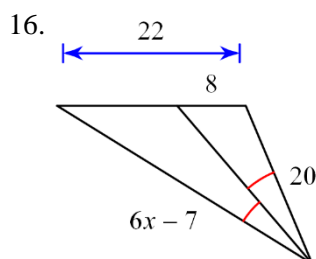
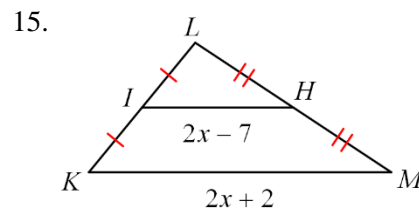
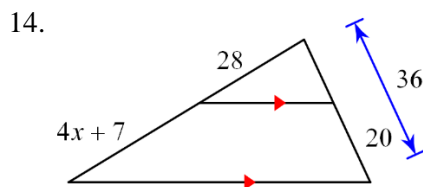
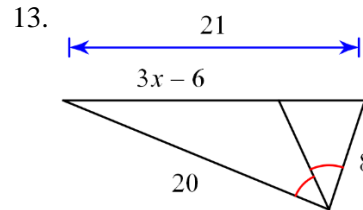
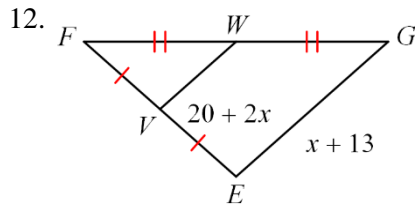
9. Scale factor (expressed as a fraction in simplest form)

10. PR

11. PQ

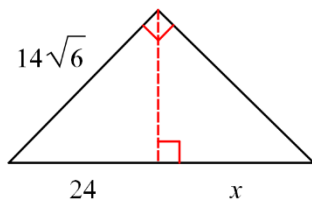


Use the appropriate theorem – angle bisector/proportional sides theorem, proportional segments theorem, triangle proportionality theorem, or midsegment theorem – to set up a proportion (or equation) & solve for x .

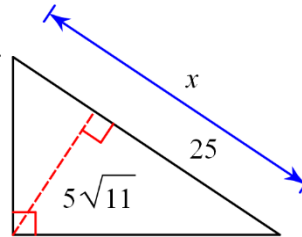


Use similar right triangle relationships to find the value of the variables. If necessary, give the answer in simplest radical form.

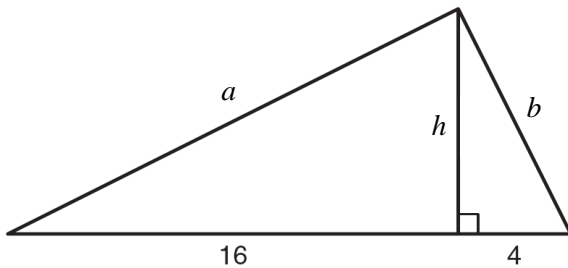
18.



19.



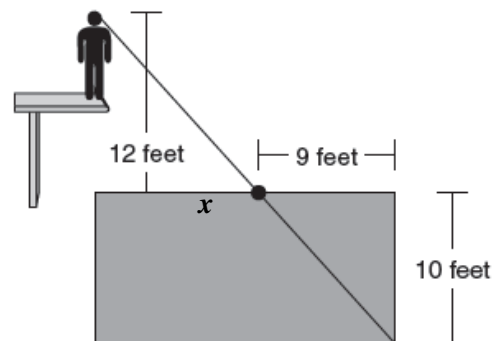
20.



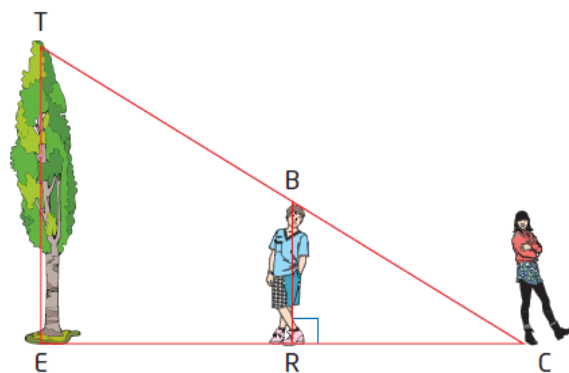
21. Carla looks from the top of a diving board and lines up a ball floating on the surface of the water with the bottom of the opposite corner of the pool.

Use similar triangles to set up and solve a proportion to find the value of x .

Then calculate the total distance across the surface of the pool.



22. To measure the height of a tree, Cynthia has her little brother, BR, stand so that the tip of his shadow coincides with the tip of the tree's shadow, at point C. Cynthia's brother, who is 1.2 meters tall is 4.2 meters from Cynthia, who is standing at C, and 6.5 meters from the base of the tree. Find the height of the tree.



23. On a sunny day, Billy wants to find the height of a tree. He walks 25 feet along the shadow that the tree casts until his shadow ends at the same point as the tree's shadow. Bill is 6 feet tall and the length of his shadow is 9 feet. How tall is the tree?

24. A super-heroine slides down a 25-yard long wire from the top of a 20-yard tall building into a window 2 yards below the top of a 12-yard building. Her photo is taken by a photographer when she is at point A . At that moment, how far is she from the window?

