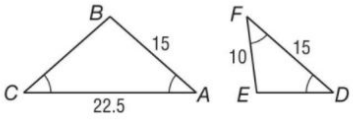
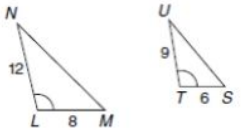
1. Of the 300 television sets sold at an electronics store last month, 90 were flat-screen TVs. What is the ratio of flat-screen TVs to other TVs sold last month?

2. Determine whether $\triangle ABC \sim \triangle DEF$. Justify your answer.

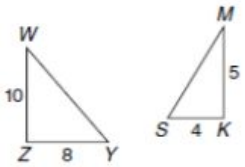


3. Determine whether the following triangles are similar. If they are state the theorem or postulate. If not then explain why not.

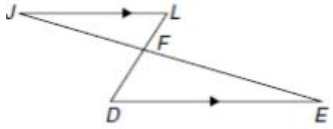
a.



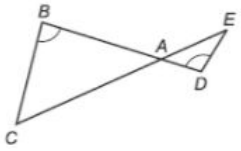
b.



c.



d.

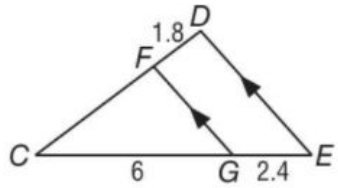


4. When a 5-foot vertical pole casts a 3 foot 4 inch shadow, an oak tree casts a 20-foot shadow. Find the height of the tree.

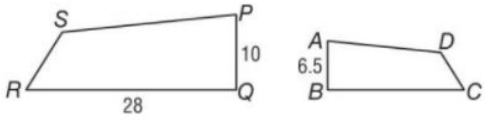
5. $ABCD \sim WXYZ,\ AB = 15,\ BC = 27$, and the scale factor of $WXYZ \sim ABCD$ is $\frac{2}{3}$. Find XY.

6. The blueprint for a swimming pool is 8 inches by $2\frac{1}{2}$ inches. The actual pool is 136 feet long. Find the width of the pool.

7. Find CD

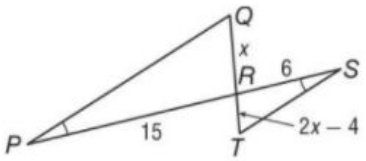


8. If $ABCD \sim PQRS$, find BC



9. $\triangle ABC \sim \triangle XYZ,\ AB = 12,\ AC = 16,\ BC = 20,$ and $XZ = 24.$ Find the perimeter of $\triangle XYZ.$

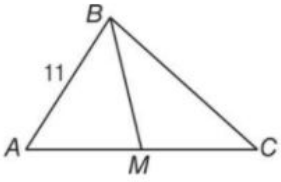
For questions 9 and 10, use the figure.

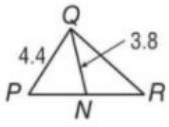


10. Identify the similar triangles

11. Find the value of x.

12. If $\triangle ABC \sim \triangle PQR$ and $\overline{BM}$ and $\overline{QN}$ are medians, find BM.

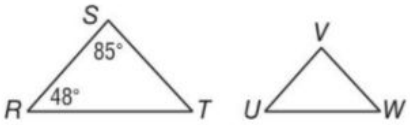




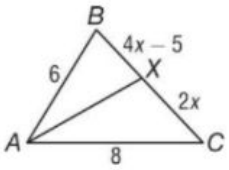
13. The ratio of the measures of the three sides of a triangle is 3:4:6. If the perimeter is 91, find the length of the longest side.

14. The ratio of the measures of the angles of a triangle is 4:6:6. Find the measures of each angle.

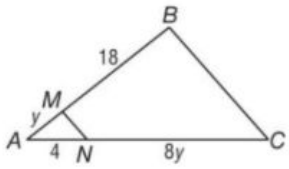
15. If $\triangle RST \sim \triangle UVW$, find $m\angle W$



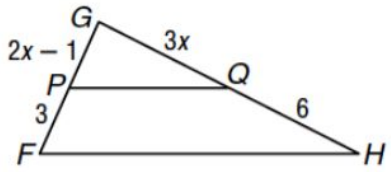
16. In $\triangle ABC$, $\overline{AX}$ bisects $\angle BAC$. Find the value of x.



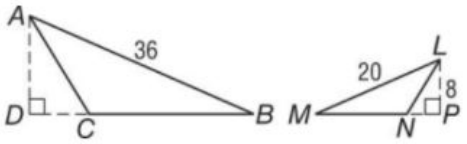
17. Find the value of y so that $\overline{MN} \parallel \overline{BC}$.



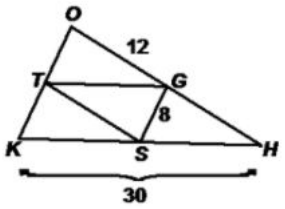
18. Find x so that $\overline{PQ} \parallel \overline{FH}$



19. $\triangle ABC \sim \triangle LMN$, and $\overline{AD}$ and $\overline{LP}$ are altitudes. Find AD.



Use the diagram for questions 17-19.
In $\triangle OKH$, G, T, & S are midpoints.

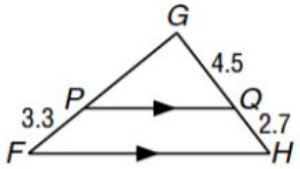


20. Find GT

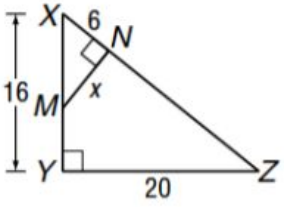
21. Find OK

22. Find the perimeter of $\triangle GTS$

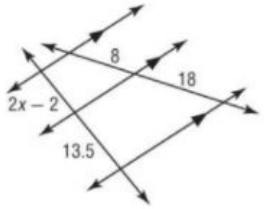
23. Find GP



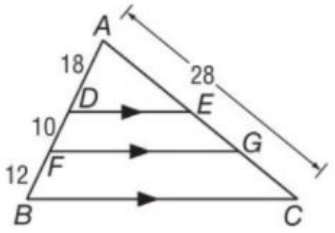
24. Find MN



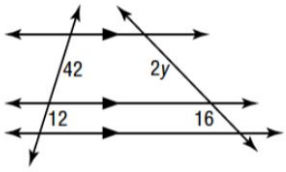
25. Find the value of x.



26. Find EG

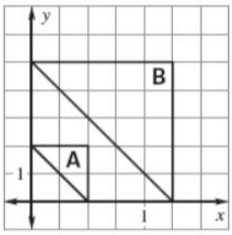


27. Find y



In questions 22 & 23, tell whether the dilation is a *reduction* or an *enlargement*, then find its scale factor.

28.



29.