

Geo Chapter 7 Review – Triangle Similarity

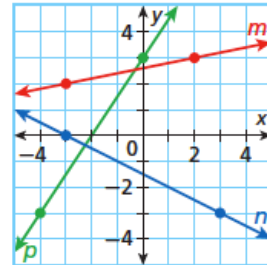
Name:

Per:

Vocab: dilation, slope, indirect measurement, means, proportion, ratio, scale, scale factor, similar, similar polygons, similarity ratio

Write a ratio expressing the slope of each line:

1. line m
2. line n
3. line p



Solve each proportion:

4. $\frac{y}{7} = \frac{9}{3}$

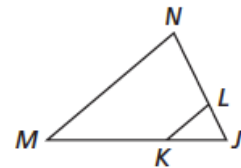
5. $\frac{10}{4} = \frac{25}{s}$

6. $\frac{4}{z-1} = \frac{z-1}{36}$

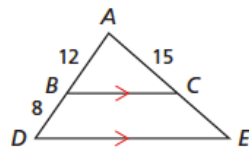
7. $\frac{y+1}{24} = \frac{2}{3(y+1)}$

Problems 10 and 11, complete the proofs below showing similarity in triangles:

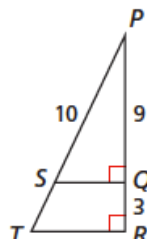
10. **Given:** $JL = \frac{1}{3}JN, JK = \frac{1}{3}JM$
Prove: $\triangle JKL \sim \triangle JMN$



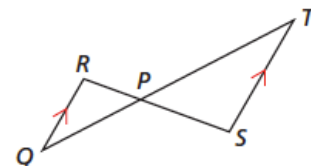
8. Find length CE



9. Find length ST

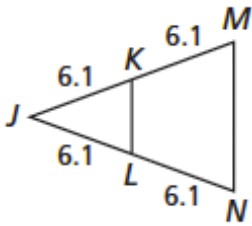


11. **Given:** $\overline{QR} \parallel \overline{ST}$
Prove: $\triangle PQR \sim \triangle PTS$



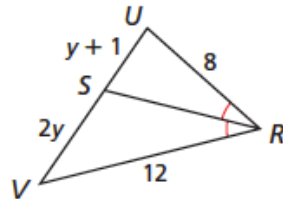
Casey's height is 5 ft 4 in., what is the height x of the flagpole?

12. Verify \overline{KL} and \overline{MN} are parallel.

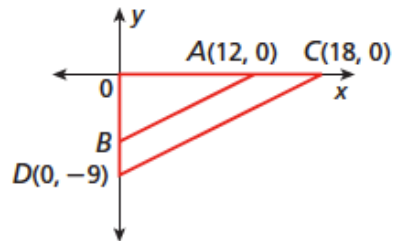


16. Maggie is 3 ft from a lamppost that is 12 ft high. The lamppost and its shadow form the legs of a right triangle. Maggie is 6 ft tall and is standing parallel to the lamppost. How long is her shadow?

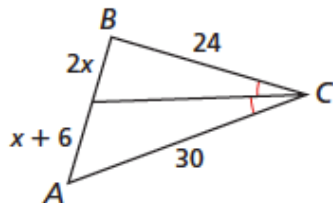
13. Find SU and SV , given $\angle URV$ is bisected.



17. Given that $\triangle AOB \sim \triangle COD$, find the coordinates of B and the scale factor.

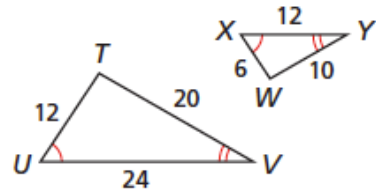


14. Find the third length of $\triangle ABC$



Determine if the shapes below are similar.

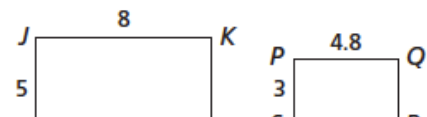
18. $\triangle TUV$ and $\triangle WXY$



15. To find the height of a flagpole, Casey measured his own shadow and the flagpole's shadow. Given that



rectangles $JKLM$ and $PQRS$



19.