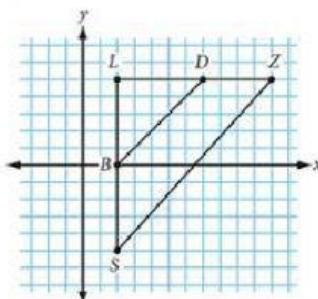


True or False. If false, explain why. **Answer only True or False to check, explanations will not be checked.**

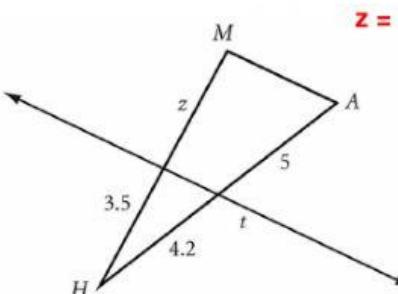
- _____ 1) If a polygon is dilated by a scale factor of 1, then the original polygon and its image are congruent.
- _____ 2) If a polygon is dilated by a scale factor of $\frac{3}{2}$ then the dilated figure is a reduction.
- _____ 3) If two figures are similar then their corresponding angles are congruent and their corresponding sides are congruent.
- _____ 4) AA~, SSS~, and ASA~ are three short cuts that can be used to determine whether two triangles are similar.
- _____ 5) If two triangles are similar, then the lengths of their corresponding medians are proportional to the lengths of the corresponding sides.
- _____ 6) If one polygon is a dilated image of another polygon then, the polygons are similar.

7. Is $\triangle SLZ \sim \triangle BLD$? Explain why or why not.

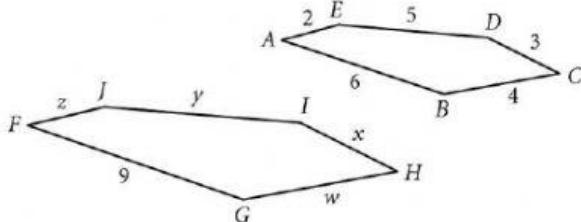
Just enter yes or no to check, not the explanation.



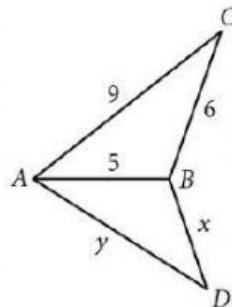
8. Given $\overline{MA} \parallel t$, find z



9. $ABCDE \sim FGHIJ$, find the unknown side lengths.



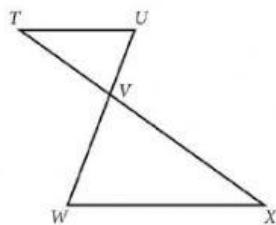
10. $\triangle ABC \sim \triangle DBA$, find x and y.



$$w = \underline{\hspace{2cm}} \quad x = \underline{\hspace{2cm}} \quad y = \underline{\hspace{2cm}} \quad z = \underline{\hspace{2cm}}$$

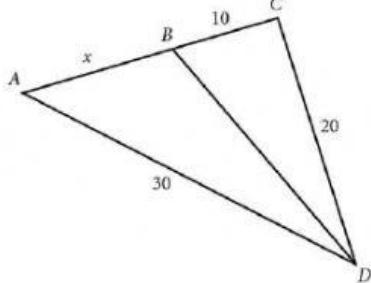
$$x = \underline{\hspace{2cm}} \quad y = \underline{\hspace{2cm}}$$

11. Given $\overline{TU} \parallel \overline{WX}$
 $\Delta TUV \sim \Delta$ _____
 Explain why.

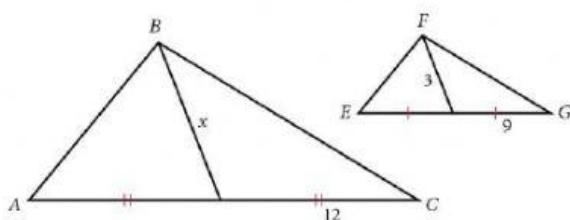


12. \overline{BD} bisects $\angle CDA$. Find x.

x =

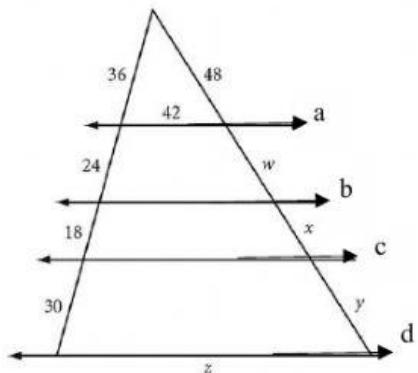


13. If $\Delta ABC \sim \Delta EFG$, find x.



x =

14. If $a \parallel b \parallel c \parallel d$, find the unknown side lengths.



$$w = \underline{\hspace{2cm}} \quad x = \underline{\hspace{2cm}} \quad y = \underline{\hspace{2cm}} \quad z = \underline{\hspace{2cm}}$$

Solve for x.

$$15. \frac{6}{22} = \frac{x}{36}$$

$$16. \frac{8}{7} = \frac{b}{b-10}$$

$$17. \frac{x-3}{8} = \frac{x+2}{11}$$

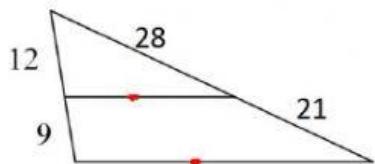
x =

b =

x =

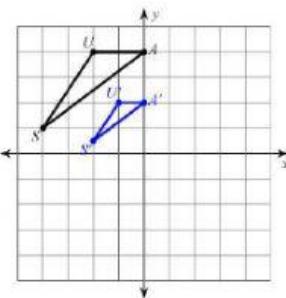
18. Are the lines parallel? Explain your answer.

Just enter yes or no, not the explanation.

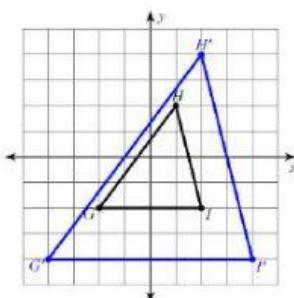


Determine whether the dilation is an enlargement or a reduction, find the scale factor, then write the ordered pair rule.

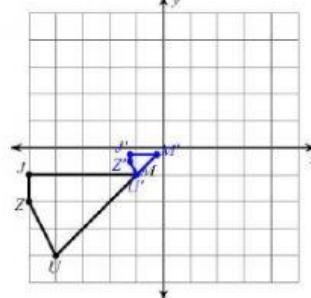
19.



20.



21.



type one

Enlargement or Reduction

Scale factor _____

$(x, y) \rightarrow (\quad , \quad)$

type one

Enlargement or Reduction

Scale factor _____

$(x, y) \rightarrow (\quad , \quad)$

type one

Enlargement or Reduction

Scale factor _____

$(x, y) \rightarrow (\quad , \quad)$

22. Katie is 6 feet tall and casts a shadow that is 2.5 feet. If the palm tree next to her casts a shadow of 8.75 feet at the same time of day, how tall is the palm tree? Include a diagram.

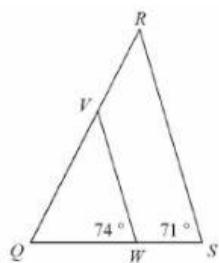
palm tree = _____ ft

23. Katie wanted to be sure that the height of the palm tree was correct. She decided to calculate the height of the tree using a second method that she learned in Geometry class. She placed a mirror between herself and the tree and then moved away from the mirror until she could see the top of the tree. She measured the distance from herself to the crosshairs of the mirror to be 4.5 feet and the mirror to the tree to be 16 feet. If Katie's eye height is 5.8 feet, how tall is the palm tree? What can be concluded about the Katie's measurements? Include a diagram.

palm tree = _____ ft

Determine if the triangles are similar. If so finish the similarity statement and give a reason to support your answer. If not similar, write "not similar".

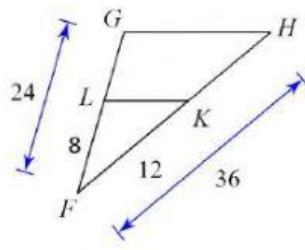
24.



$$\triangle QRS \sim \triangle \underline{\hspace{2cm}}$$

shortcut

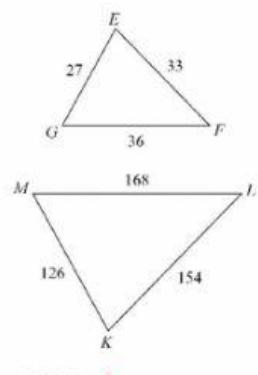
25.



$$\triangle FGH \sim \triangle \underline{\hspace{2cm}}$$

shortcut

26.

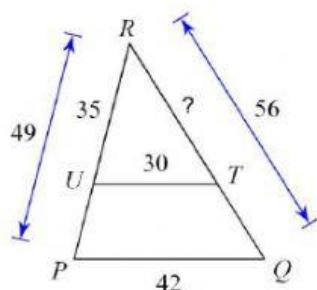


$$\triangle KLM \sim \triangle \underline{\hspace{2cm}}$$

shortcut

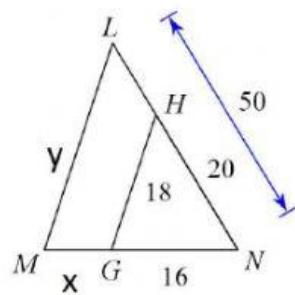
Given that the triangles are similar, find the missing side length(s).

27.



$$RT = \underline{\hspace{2cm}}$$

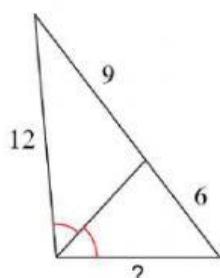
28.



$$y = \underline{\hspace{2cm}}$$

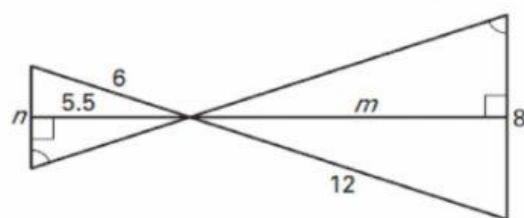
$$x = \underline{\hspace{2cm}}$$

29.



$$? = \underline{\hspace{2cm}}$$

30.



$$n = \underline{\hspace{2cm}}$$

$$m = \underline{\hspace{2cm}}$$