Math 2 Unit 6
Review Worksheet

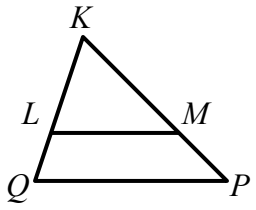
Name:_____
Date:_____ **Per:**_____

[1-9] Select the correct multiple choice response. Show all work.

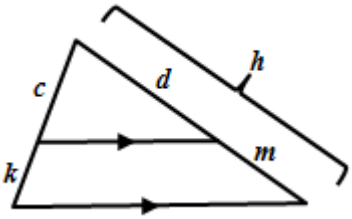
1. Solve the proportion: $\frac{8}{14} = \frac{x}{35}$
   a. 24
   b. 21
   c. 25
   d. 20

2. Solve the proportion: $\frac{3}{5} = \frac{x+10}{45}$
   a. 9
   b. 17
   c. 25
   d. 27

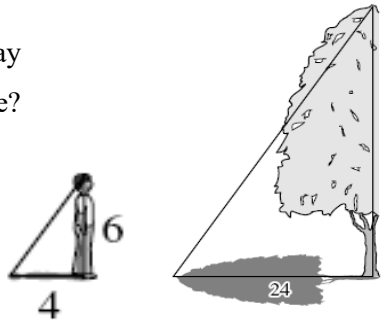
3. Given: $\Delta KLM \sim \Delta KQP$
   Which side below makes the proportion $\frac{KQ}{KL} = \frac{?}{KM}$ true?
   a. KP
   b. KM
   c. LM
   d. QP



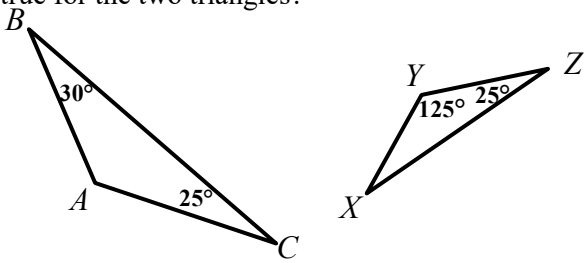
4. Which proportion is accurate for the diagram shown?
   a. $\frac{d}{h} = \frac{c}{k}$
   b. $\frac{d}{h} = \frac{k}{c}$
   c. $\frac{d}{h} = \frac{c}{c+k}$
   d. $\frac{d}{h} = \frac{c}{c-k}$



5. A 6-foot boy has a shadow that is 4 feet. At the same time of day a tree has a shadow that is 24 feet. What is the height of the tree?
   a. 12 ft.
   b. 18 ft.
   c. 24 ft.
   d. 36 ft.



6. Which similarity statement below is true for the two triangles?
   a. ΔBCA ~ΔXZY
   b. ΔABC ~ΔZXY
   c. ΔBAC ~ΔZXY
   d. ΔABC ~ΔYZX



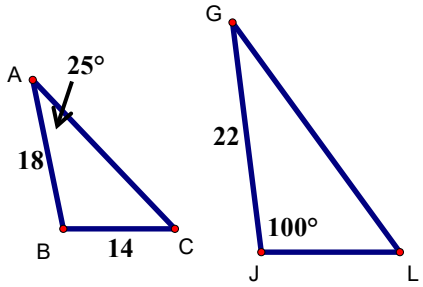
7. $\Delta A'B'C'$ is the image of ΔABC under a dilation with a scale factor of 2.5 centered at the origin. If $AB = 8$ units, what is the unit length of $\overline{A'B'}$?
   a. 20
   b. 16
   c. 4
   d. 2.5

8. Using the diagram below, $\Delta ABC \sim \Delta GJL$

a) $m\angle B =$ _____

b) $m\angle L =$ _____

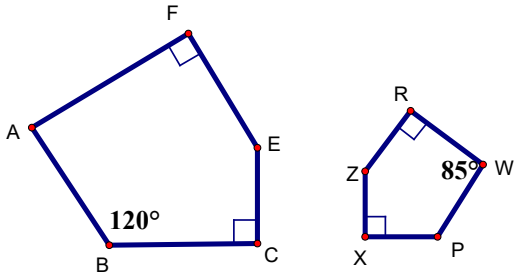
c) Find the scale factor of the smaller triangle to the larger _____



9. Using the diagram below, $ABCEF \sim WPXZR$

a) $m\angle A =$ _____

b) $m\angle P =$ _____

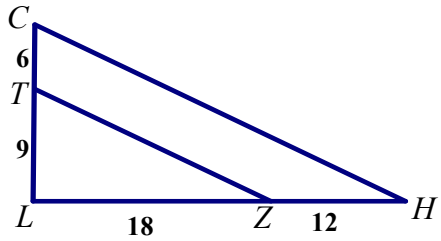


[10-14] Determine if the triangles are similar.

a) Complete the statement of similarity. b) State the postulate or theorem that justifies the similarity.
If not similar, write 'not similar' for both 'a' and 'b' and explain.

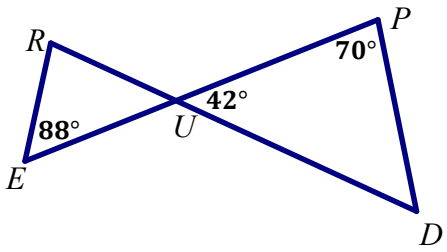
10. a) $\Delta TLZ \sim \Delta$ _____

b) _____



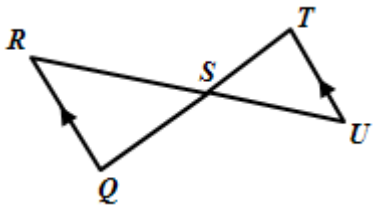
11. a) $\Delta URE \sim \Delta$ _____

b) _____



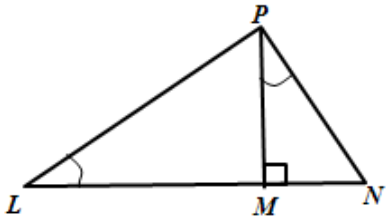
12. a) $\Delta RQS \sim \Delta$ _____

b) _____



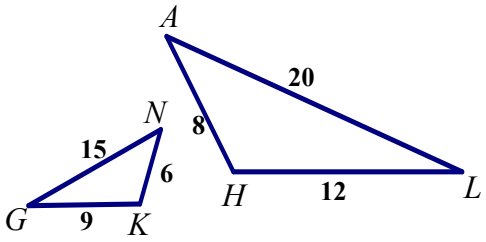
13. a) $\Delta LMP \sim \Delta$ _____

b) _____



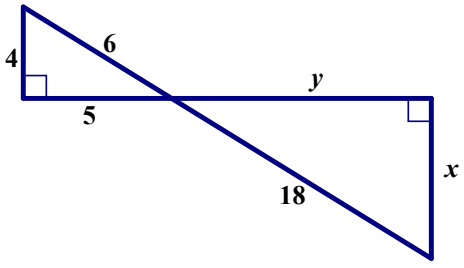
14. a) $\Delta KGN \sim \Delta$ _____

b) _____

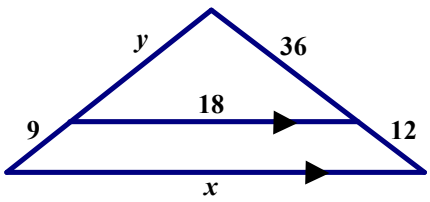


[15-18] The following figures are similar. Find the values of the variable(s).

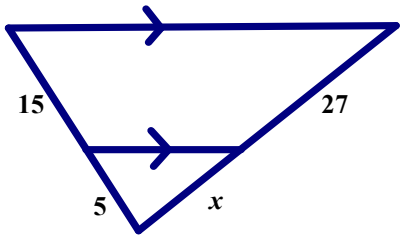
15. $x =$ _____ $y =$ _____



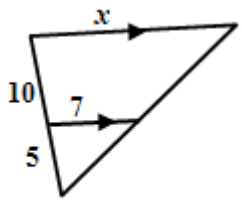
16. $x =$ _____ $y =$ _____



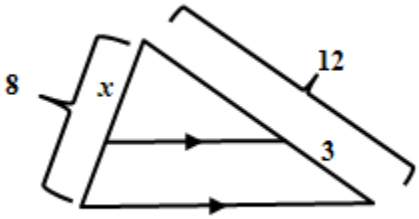
17. $x =$ _____



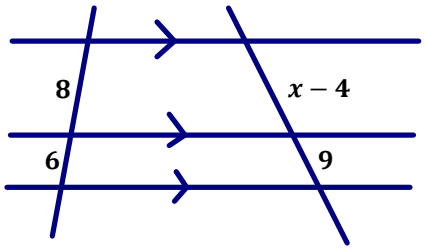
18. $x =$ _____



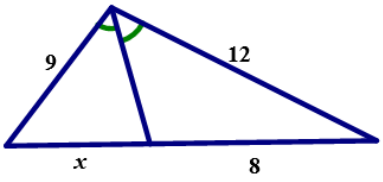
19. $x =$ _____



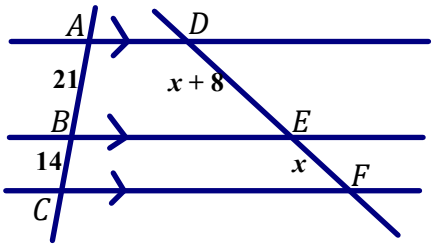
20. $x =$ _____



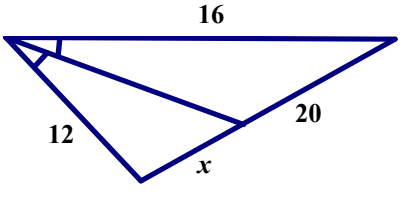
21. $x =$ _____



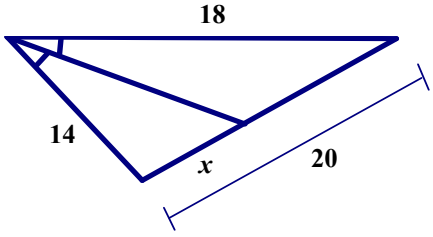
22. $x =$ _____ $DF =$ _____



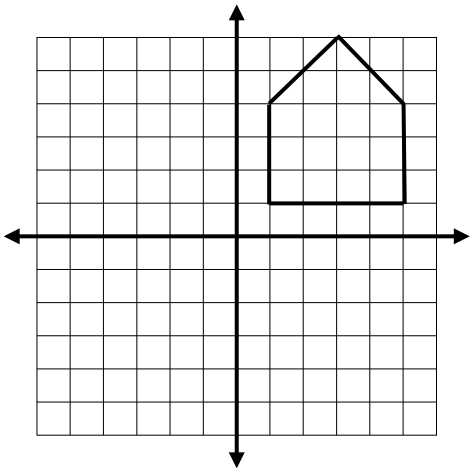
23. $x =$ _____



24. $x =$ _____

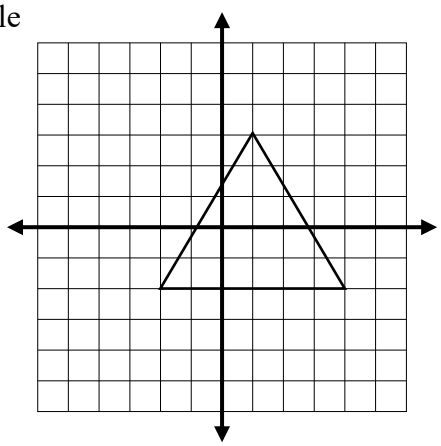


25. A student dilates the figure at the right using a center of dilation of (0, 0) and a scale factor of 2. Which statement is true?



a) Each angle of the dilated house will be similar but not congruent in the original house.
b) Each line segment in the dilated house will be parallel to its corresponding line segment in the original house.
c) Some of the line segments of the dilated house may have different slopes than their corresponding line segments in the original house
d) The distance between the vertices of a line segment on the dilated house will be 4 times the distance between the vertices of a line segment on the original house.

26. For the triangle at the right,



a) Graph the figure representing a dilation of the triangle by a scale factor of 1.5 with the center at (0, 0).

b) Should the two triangles be similar? _____

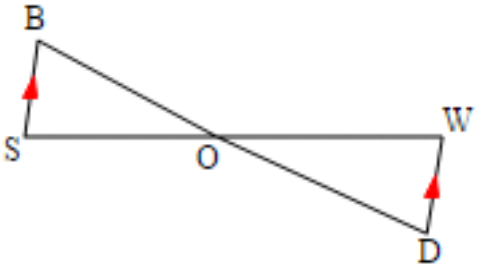
c) Should the corresponding sides be parallel? _____

d) Should the corresponding sides be congruent? _____

e) Should the corresponding angles be congruent? _____

27. Make a two-column proof.

Given: $\overline{BS} \parallel \overline{WD}$
Prove: $\Delta BSO \sim \Delta DWO$



Statement	Reason