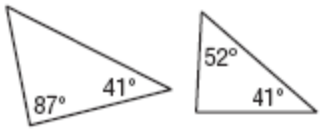
Name:_____ Class:_____ Date:_____

GH Chapter 7 (and 6) Test Review

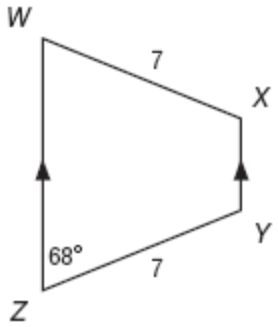
Determine whether each pair of triangles is similar. Justify your answer.

1. 

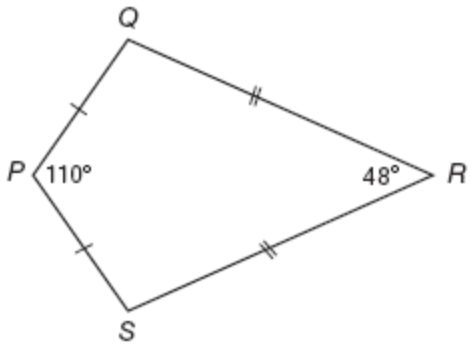
_____

Find each measure.

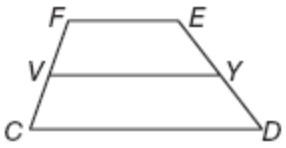
2. $m\angle Y$=_____



3. $m\angle Q$=_____



ALGEBRA For trapezoid *FEDC*, *V* and *Y* are midpoints of the legs.



4. If $m\angle F = 140$ and $m\angle E = 125$, find $m\angle D$._____

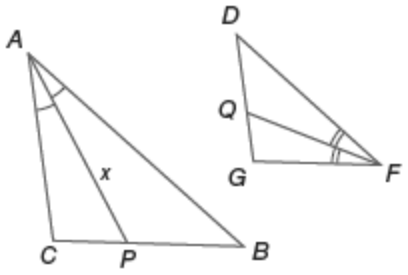
5. If $FE = 18$ and $VY = 28$, find CD._____

6. In $\triangle ABC$, $\overline{DE}$ is parallel to $\overline{AC}$ and $DE = 15$. Find the length of $\overline{AC}$ if $\overline{DE}$ is midsegment of $\triangle ABC$.

.

7. The ratios of measures of the angles in $\triangle ABC$ is 3:7:10. Find the measures of the smallest angle._____

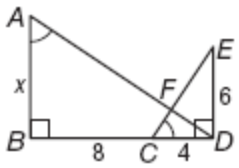
8. In the figure, $\triangle ABC \sim \triangle FDG$, $AC = 15$, $FG = 10$, and $FQ = 12$. Find AP.



Name:_____ Class:_____ Date:_____

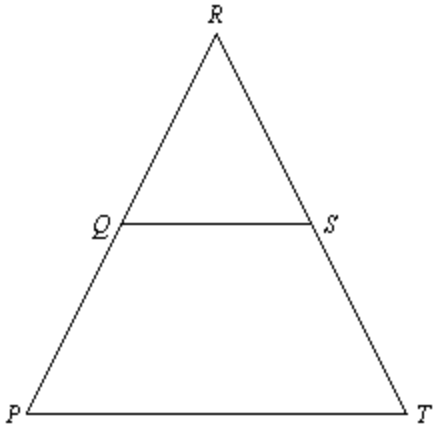
GH Chapter 7 (and 6) Test Review

9. Identify the similar triangles in the figure, then find the value of *x*.



_____, *x*= _____

10. Find *x* so that $\overline{QS} \parallel \overline{PT}$.



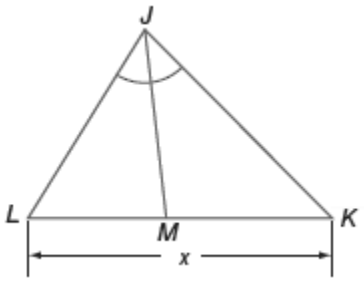
PQ = 12, *QR* = 3, *RS* = 7, *ST* = *x* + 1

11. If $\triangle ABC \sim \triangle EFG$ and $\overline{BD}$ and $\overline{FH}$ a re medians, find ***BD***._____

12. When a 15-foot tall climbing wall cast a 20-foot shadow, a building cast a 32-foot shadow. Find the height of the building.

_____

13. In the figure, *LJ* = 10, *KJ* = 11, and *KM* = 7. Find *LK*.



Indicate one or more answer choices that best complete the statement or answer the question.

14. $\triangle ABC \sim \triangle EFG$. Which proportion(s) must be true?

a. $\frac{AB}{BC} = \frac{EF}{FG}$

b. $\frac{CA}{BA} = \frac{FE}{GE}$

c. $\frac{EF}{AB} = \frac{FG}{BC}$

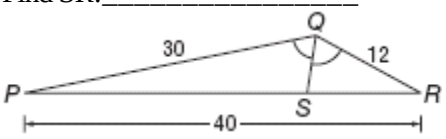
d. $\frac{AB}{EG} = \frac{AC}{EF}$

e. $\frac{BC}{FG} = \frac{AC}{EG}$

Name:_____ Class:_____ Date:_____

GH Chapter 7 (and 6) Test Review

15. Find *SR*._____



.

Find the measures of an exterior angle and an interior angle given the number of sides of each regular polygon. Round to the nearest tenth, if necessary.

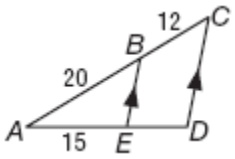
Indicate the answer choice that best completes the statement or answers the question.

16. 18_____, _____

a. 20, 160
b. 12, 168
c. 12, 348
d. 30, 150

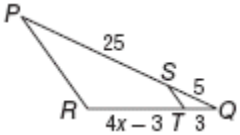
17. 12 _____, _____

18. Find ***AD***._____



Indicate the answer choice that best completes the statement or answers the question.

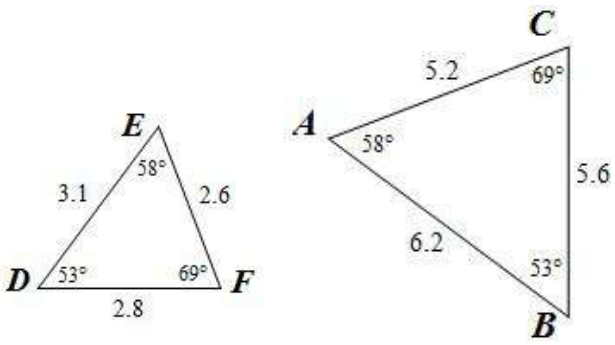
19. Find the value of *x* so that $\overline{ST} \parallel \overline{PR}$.



a. 6 b. $4\frac{1}{2}$ c. 4 d. $6\frac{1}{2}$

Determine whether each pair of figures is similar. Justify your answer.

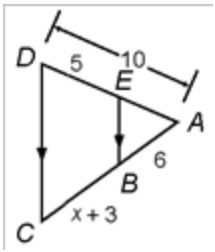
20.



_____

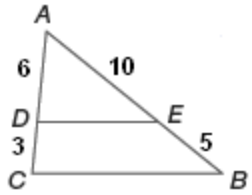
Find x and the measures of the indicated parts.

21. *BC* and *AC*



Determine whether each pair of triangles is similar. Justify your answer.

22.



23. Tim enlarged a picture with a width of 4.5 inches and a length of 9 inches by a scale factor of 2.5. What are the dimensions of the enlargement?

Name:_____ Class:_____ Date:_____

GH Chapter 7 (and 6) Test Review

Indicate the answer choice that best completes the statement or answers the question.

24. Rectangle $ABCD \sim$ rectangle $EFGH$, the perimeter of *ABCD* is 54 centimeters and the perimeter of *EFGH* is 36 centimeters. What is the scale factor of *ABCD* to *EFGH*?

    a. $\frac{3}{5}$ b. $\frac{3}{2}$

    c. $\frac{5}{3}$ d. $\frac{2}{3}$

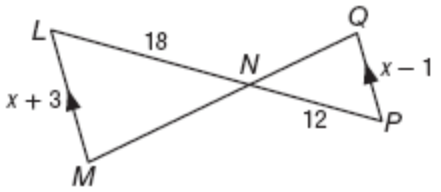
25. Find the sum of the measures of the interior angles of a convex 48-gon.

    a. 360 b. 8640

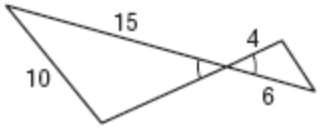
    c. 172.5 d. 8280

ALGEBRA

26. Write a similarity statement for the diagram, then find *ML and QP*.

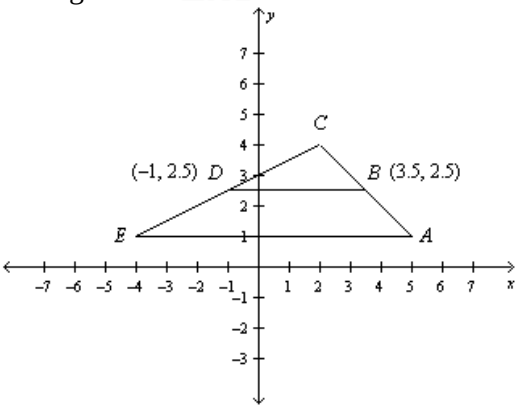


Determine whether each pair of triangles is similar. Justify your answer.

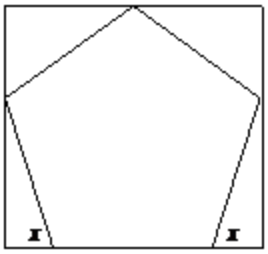
27. 

_____

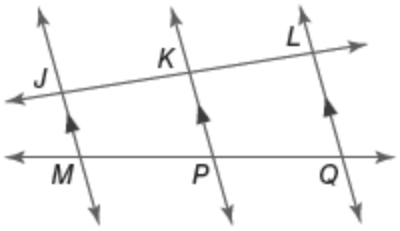
28. Find the length of $\overline{AE}$ if $\overline{BD} \parallel \overline{AE}$ and $\overline{BD}$ is a midsegment of $\triangle ACE$.



29. This jewelry box has the shape of a regular pentagon. It is packaged in a rectangular box as shown here. The box uses two pairs of congruent right triangles made of foam to fill its four corners. Find the measure of the foam angle marked._____



30. In the figure, *JK* = 10, *KL* = 8, and *MP* = 11. Find *PQ*.



Name:_____ Class:_____ Date:_____

GH Chapter 7 (and 6) Test Review

Answer Key

1. yes; AA

2. 112

3. 101

4. 55

5. 38

6. 30

7. 27

8. 18

9. $\triangle ABD \sim \triangle CDE$; 8

10. 27

11. 9

12. 24 ft

13. $\frac{147}{11}$

14. a, c, e

15. $11\frac{3}{7}$

16. a

17. 30, 150

18. 24

19. b

20. $\triangle DEF \sim \triangle BAC$ because the corresponding angles of each triangle are congruent. The ratio of the corresponding sides is $\frac{1}{2}$.

21. $x = 3, BC = 6, AC = 12$

22. yes; $\triangle AED \sim \triangle ABC$ by SAS Similarity

23. width: 11.25 in.; length: 22.5 in.

24. b

25. d

26. $\triangle LMN \sim \triangle PQN$; $ML = 12$; $QP = 8$

27. No; SAS does not apply.

28. 9

29. 72

30. $\frac{44}{5}$