

Name:

Date:

Period:

HW #8-7: Quiz Review

1. If two similar polygons have perimeters of 25 and 100, what is the ratio of their corresponding sides? What is the ratio of their areas?

per: 4 or $\frac{1}{4}$ area: 16 or $\frac{1}{16}$

2. There are 96 marbles in a bag. The ratio of green:red:blue marbles is 2:3:7. How many red marbles are in the bag?

24

3. Figure A has an area of 1050 ft^2 and one of its side lengths is 35 ft. Figure B has a corresponding side length of 28 ft. What is the area of Figure B? **USE THE AREAS OF SIMILAR POLYGONS THEOREM**

672 ft^2

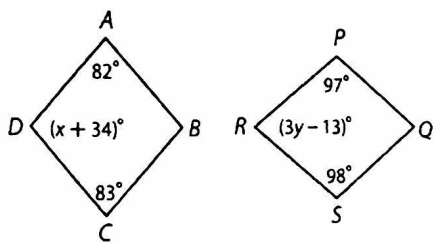
4. You are using a digital projector for a slide show. The photos are 13 in by 9.25 in on the computer screen. The scale factor of the computer image to the projected image is 1:4. What are the dimensions of the projected image?

52 in x 37 in

5. $\triangle ABC$ has side lengths of 4, 8, and 9. The shortest side of a triangle similar to $\triangle ABC$ is 5 units long. What are the lengths of the other two sides in the similar triangle?

10 and 11.25

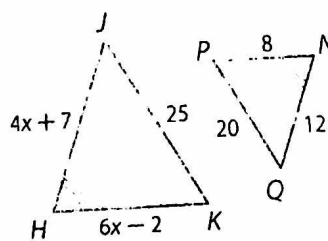
6. Find the values of x and y that make $ABCD \sim QSRP$.



$$x = 63$$

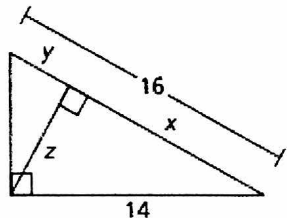
$$y = 32$$

7. Find the value of x that makes the triangles similar.



$$x = 2$$

8. USE GEOMETRIC MEANS to find the values of x , y , and z . Round to the nearest hundredth, if necessary.

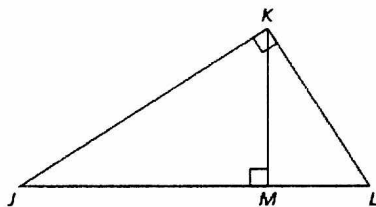


$$x = 12.25$$

$$y = 3.75$$

$$z \approx 6.78$$

9. Write a similarity statement for the three triangles.



$$\triangle JKM \sim \triangle KML \sim \triangle KLT$$

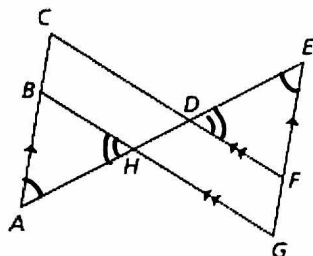
10. Find the geometric mean of 12 and 15. Exact answer.

$$6\sqrt{5}$$

11. Write a two-column proof.

Given: $\overline{AC} \parallel \overline{GE}$ and $\overline{BG} \parallel \overline{CF}$

Prove: $\triangle ABH \sim \triangle EFD$



S	R
① $\overline{AC} \parallel \overline{GE}, \overline{BG} \parallel \overline{CF}$	① given
② $\angle A \cong \angle E$	② $\parallel \rightarrow$ alt. int. $\angle s \cong$
③ $\angle BHA \cong \angle FDE$	③ $\parallel \rightarrow$ alt. ext. $\angle s \cong$
④ $\triangle ABH \sim \triangle EFD$	④ AA ~