HW #6 – Test Review – Unit 7 – Similar Figures

1. Two figures that have the same shape and size are called _____.

2. In similar figures, corresponding _____ are congruent and corresponding _____ are proportional.

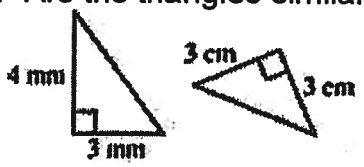
3. Define **scale factor**. _____

_____.

4. Triangles ABC and XYZ are similar. Write the similarity statement. Then write the pairs of congruent angles and the proportionality statement.

Similarity Statement	Congruent Angles	Proportionality Statement

5. Are the triangles similar? Explain. Show your work.



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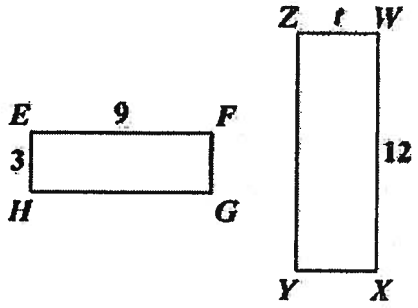
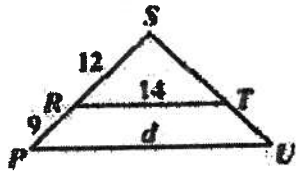
6. Given that rectangle *EFGH* ~ rectangle *WXYZ*, find *t*.

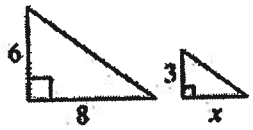


7. $\Delta RST \sim \Delta PSU$. Find the value of d.



Exercises 8 and 9 show pairs of similar polygons. Find the unknown lengths.

8.



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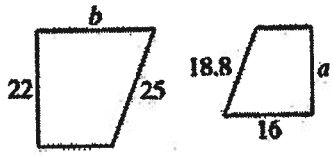

For word problems 10 – 13, draw a picture to help you set up the proportion. Show all your work.

10. A 6 ft tall tent standing next to a cardboard box casts a 9 ft shadow. If the cardboard box casts a shadow that is 6 ft long then how tall is the box?

11. A telephone booth that is 8 ft tall casts a shadow that is 4 ft long. Find the height of a lawn ornament that casts a 2 ft shadow.

12. If a 42.9 ft tall flagpole casts a 253.1 ft long shadow then how long is the shadow that a 6.2 ft tall woman casts? Round to the nearest tenth of a foot.

13. Marco draws two trapezoids. The bases of the first trapezoid are 14 and 16 cm long, and its other two sides are 6 cm long. The bases of the second trapezoid are 7 and 8 cm long, and it sides are 4 cm long. Are the trapezoids similar? Explain.

14. Sam decided to build a dog house for his dog! He drew the plan for the front of it using a scale of 1 inch = 14 inches. How tall will the length be if the drawing is 4.5 inches?

15. 14 is what percent of 30?

16. 80% is 32 of what number?

17. Simplify 16 to 30.

18. After Sam built his dog house, he was very hungry and went to McDonalds. He bought a 12 piece nuggets for $3.99. How much would one cost?

19. What is the scale used if the model of a building is 5 inches, but in real life is 1000 yards?

20. What are the real number system categories?

21. Solve and graph this inequality. What do you have to be careful of?

$$-4x - 7 < 15$$