Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_  
Geometry // Mr. Burke

Chapter 7: Similarity

Extra Practice

1. If two polygons are similar, that means that their corresponding sides are   
  
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and their corresponding angles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

2. , if *AB* = 5, *AC* = 12, and *DF* = 32.4, what is the length of *DE*?

3. , if  and , what is the measure of ?

4. A model is made of a train car. The train car is 3 meters long and the model is 5 centimeters long. What is the ratio of the length of the train car to the length of the model?

5. On a blueprint, the scale indicates that 4 cm represent 17 feet. What is the length of a room that is 6.4 cm long on the blueprint?

6. Find the geometric mean of the pair of numbers: 200 and 8

7. Find the geometric mean, in simplest radical form, of the pair of numbers: 10 and 8

8. What are the three ways to prove triangles similar?

9. In ∆*CAT*, *CA*=6, *AT* = 10, and *TC* = 14. In ∆*DOG*, *DO* = 14.4, *OG* = 24, and *GD* = 35. Is? If yes, state the theorem that supports your answer and write a similarity ratio.

10. Find the value of *x*.

9

11

2

*x*

11. Solve for *x* in simplest radical form.



8

6

*x*

12. Solve for *x*.



8

2

*x*

13. Given , solve for x.

*C*

9

3

*E*

*A*

12

*x*

*D*

*B*

14. Solve for *x*.

6

4*x* + 8

3*x* + 2

4

*N*

*G*

*A*

*R*

*H*

15. Given: 

Prove: 

|  |  |
| --- | --- |
| Statements | Reasons |
|  |  |