Geometric Properties Unit Review

1. Complete the sentences.

When parallel lines are cut by a transversal then,

1. Corresponding angles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. Alternate Interior Angles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. Same Side Interior Angles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. Alternate Exterior Angles are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

2. Use the diagram to answer the questions that follow.



1. *m*2 is 70°. Find the *m*6.
2. *m*3 = 5*x* and *m* **6 is 3*x* + 8. Find the value of *x* and the measure of

**4 and **5.

1. Given the *m*8= 110°. Find the measure of as many of the other angles as possible.
2. *m* **4 = 20*x* + 20 and *m*6 is 10*x* + 10. Find the value of *x*.

Find each missing angle measure.

|  |  |
| --- | --- |
| 3. In triangle *DEF* the measure of angle *D* is 36 and the measure of angle *E* is 92. Find the measure of angle *F*. | 4.  |
| 5.xx + 20 5x + 20 |

Find the values of the given variables.

6.

50°

65°

x°

7.

109°

y°

45°

x°

8. The measure of one angle of a triangle is twice the measure of a second angle. The measure of the third angle is 12 less than the sum of the other two. Find the measure of the angles of the triangle.

9. ∆ABC is similar to ∆DEF. Identify all corresponding angles and sides

i. ∠A corresponds to \_\_\_\_\_\_\_\_\_\_.

ii. ∠B corresponds to \_\_\_\_\_\_\_\_\_\_.

iii. ∠C corresponds to \_\_\_\_\_\_\_\_\_\_.

i. AB corresponds to \_\_\_\_\_\_\_\_\_\_.

ii. BC corresponds to \_\_\_\_\_\_\_\_\_\_.

iii. AC corresponds to \_\_\_\_\_\_\_\_\_\_.

|  |  |
| --- | --- |
| a.7799 | b. **Q****8** **4****5****D****S****R****10****B****A****P****C** |

10. Are the following figures similar? Explain.

The following figures are similar. Solve for the designated side.

**5**

**8**

**2**

**y**

11.

Each figure shows a pair of similar triangles. Find each unknown length.

12.

 30 30

x

y

20

45