**Unit 4 Test Part 1 Study Guide Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ S: \_\_\_\_**

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| --- | --- | --- |
| 1. **Identifying Inscribed Angles**  a) What is the relationship of to ?  b) DBA is congruent to what angle? | 2. **Identifying Central Angles**  a) is congruent to what arc?  b) is congruent to what arc? | |
| In the circle at right,  3. What is the measure of ?  4. What is the measure of  5. What is the measure of ?  6. What is the measure of ? | |  |

**In the circle C below, . Find the following measures.**



7.  =

8.  =

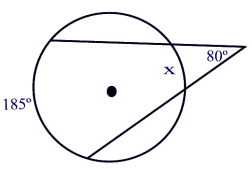
9. =

10. =

11.  =

**For the following problems, determine which theorem to use, write an equation, and solve.**

12. 13.  find 

14. 200  15.



700

16. Given  and  for the figure at right, find 



17. In the circle to the right, , , and .

Determine if  is tangent to the circle.

Show work and explain.



18. In the picture to the right, .

What is the relationship between

 and ?

19.  and  are tangent. The measure of . Find the measure of .



20. 

Find x = \_\_\_\_\_\_ Find y = \_\_\_\_\_\_\_

**Use the following figures below to answer problems #21-23.**

|  |  |  |  |
| --- | --- | --- | --- |
|  | | | |
| 21.  Arc Length = \_\_\_\_\_\_  Sector Area = \_\_\_\_\_\_ | 22.  Arc Length = \_\_\_\_\_\_  Sector Area = \_\_\_\_\_\_ | | 23.  Arc Length = \_\_\_\_\_\_  Sector Area = \_\_\_\_\_\_ |
| 24. Convert 280 degrees to a pi radian angle measure. | | 25. Convert a angle measure to degrees. | |
| 26. If a central angle measures 145 degrees and creates a sector with an area if , what is the radius of the circle? | | 27. The diameter of a pie is 10 in. The pie is cut into 8 slices. What is the arc length and sector area of each slice? | |
| 28. The radius of a bike wheel is 12 inches. There are 9 spokes on the wheel. What is the length between each spoke? | | 29. There are two pies each with a diameter of 12 in. One pie is cut into 6 slices. The other is cut into 10 slices. Which pie has more area per slice and by how much? | |
| 31. A circular track has a diameter of 100 yards. A track athlete sprints around half the track. How far did the athlete sprint? | | 32. MAKE SURE YOU UNDERSTAND HOW TO DIAGRAM 1 RADIAN & WHAT IT MEANS IN TERMS OF PI. | |