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

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| 1. **Identifying Inscribed Angles**a) What is the relationship of $∡AED$ to $\hat{AD}$?b) $∡$DBA is congruent to what angle? | 2. **Identifying Central Angles**a) $∡ACB$ is congruent to what arc?b) $∡ACD$ is congruent to what arc? |
| In the circle at right, $\hat{KL}=115°.$3. What is the measure of $\hat{MNK}$?4. What is the measure of $∡MLK?$5. What is the measure of $\hat{ML}$?6. What is the measure of $∡MKL$? |  |

**In the circle C below,** $m∡CAB=35°, and m∡ACB=110°$**. 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.**

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|  |
| 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 $\frac{11π}{6}$ angle measure to degrees. |
| 26. If a central angle measures 145 degrees and creates a sector with an area if $200π cm^{2}$ , 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. |