STUDY GUIDE Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_ Period\_\_\_

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| Equation of a circle:  Where (h,k) is the center and r is the radius.  **Ex**: Write an equation for a circle with a radius of 8 and a center at (3,-2)  Answer: | 1. What is the equation of the circle to the right?  2. what are the center and the radius of the following circle:  ? | |
| Completing the square: | | Use completing the square to put the following equations of a circle in standard form: |
|  | 4x=3(8) simplify  4x=24 divide by 4  X=6 | 1.  2. |
| outside ∙ whole = outside ∙ whole | simplify  subtract 16  divide by 4  1 | 1.    2. |
| Image result for central angle  Image result for inscribed angle  Central angle = intercepted arc Inscribed angle = ½ (intercepted arc)  X=80 X= 50 | | 1. 2. |
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| ARC LENGTH:    SECTOR AREA: | Find the arc length    L = 60.5 feet  Find the sector area    A = 536.2 | arc length:  Sector area:  You are eating a doughnut. The missing circle in the middle has a radius of 0.2 inches. The entire doughnut has a radius of two inches. Your first bite takes 70 degrees out of the circle. What is the remaining area of the doughnut? |
| (big arc) – (small arc) = 2(angle)      simplify simplify  add divide      simplify  divide | |  |
| OR  simplify  divide | |  |
| A circumscribed angles and their arcs are always supplementary.    subtract | | Find angle R if angle O is 70 degrees. |