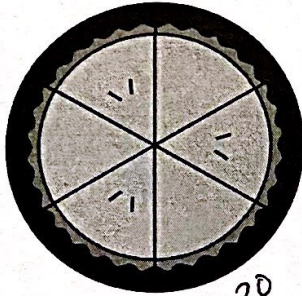


# Arc Length and Sector Area

Name: \_\_\_\_\_

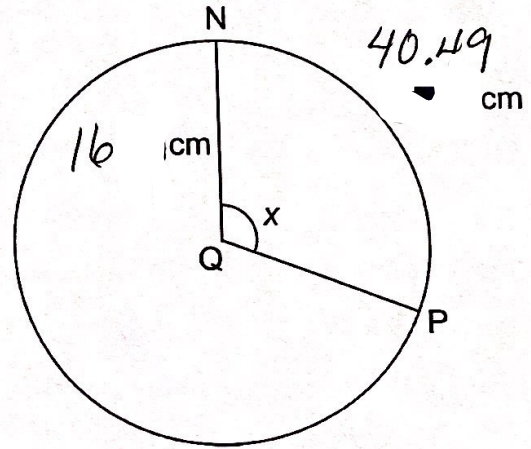
Date: \_\_\_\_\_

11. An apple pie is cut into six equal slices as shown below.



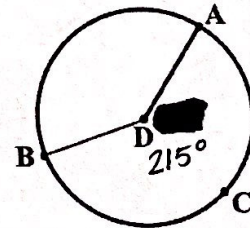
If the diameter of the pie is  $\blacksquare$  inches, what is the approximate arc length of one slice of pie?  
*\* round to the hundredths place.*

12. Use the diagram to answer the question.

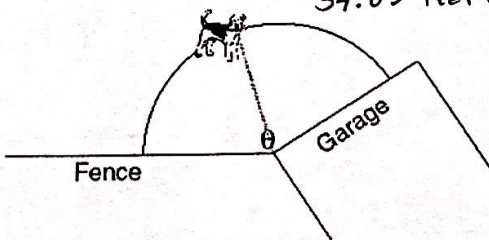


This circle, with center point Q, has a radius of  $\blacksquare$  centimeters. The length of the minor arc NP is  $\blacksquare$  centimeters. To the nearest degree, what is the value of  $x$ ?

13. What is the length of  $\widehat{AB}$  if radius  $\overline{AD} = \blacksquare$  ft.



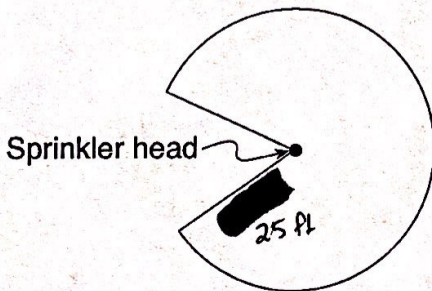
14. A dog has a <sup>15</sup> foot leash attached to the corner where a garage and a fence meet, as shown in the accompanying diagram. When the dog pulls the leash tight and walks from the fence to the garage, the arc the leash makes is 34.03 feet.



(Not drawn to scale)

What is the measure of angle  $\theta$  between the garage and the fence round to the nearest degree

15. Cerise waters her lawn with a sprinkler that sprays water in a circular pattern at a distance of 25 feet from the sprinkler. The sprinkler head rotates through an angle of 330°, as shown by the shaded area in the accompanying diagram.



What is the area of the lawn, to the nearest square foot, that receives water from this sprinkler?

16. Ileana buys a large circular pizza that is divided into eight equal slices. She measures along the outer edge of the crust from one piece and finds it to be  $6\frac{1}{2}$  inches. What is the diameter of the pizza to the nearest inch?

17. The area of a circle is represented by  $100\pi$ . What is the length of a diameter of the circle?

18. If the circumference of a circle is  $48\pi$ , what is the length of a radius of the circle?

19. What is the diameter of a circle whose circumference is  $8\pi$ ?

20. The area of a circle is  $81\pi$ . What is the circumference of the circle?