Enhanced End of Topic Assessment

Name _____ **Date** _____

Part A: Multiple-Choice Questions

1. Approximately how much fencing is needed to enclose a circular pond with a diameter of 12.5 feet?

    a. 122.66 ft

    b. 19.625 ft

    c. 78.5 ft

    d. 39.25 ft

2. A circular marble tabletop has a diameter of 42 inches. Which measurement is closest to the area of the circular marble tabletop in square inches?

    a. 5540 in.^{2}

    b. 1385 in.^{2}

    c. 132 in.^{2}

    d. 264 in.^{2}

3. The circumference of a circle is B inches. The radius of the same circle is 4.5 inches. Which expression best represents the value of π?
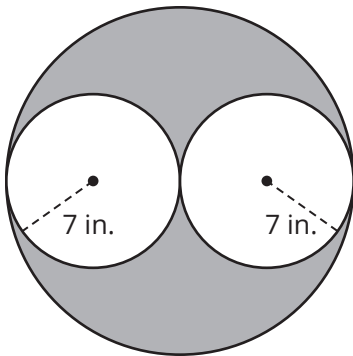
a. $\dfrac{B}{4.5}$

b. $\dfrac{4.5}{B}$

c. $\dfrac{B}{9}$

d. $\dfrac{9}{B}$

4. Two small circles are drawn that touch each other, and both circles touch the large circle.

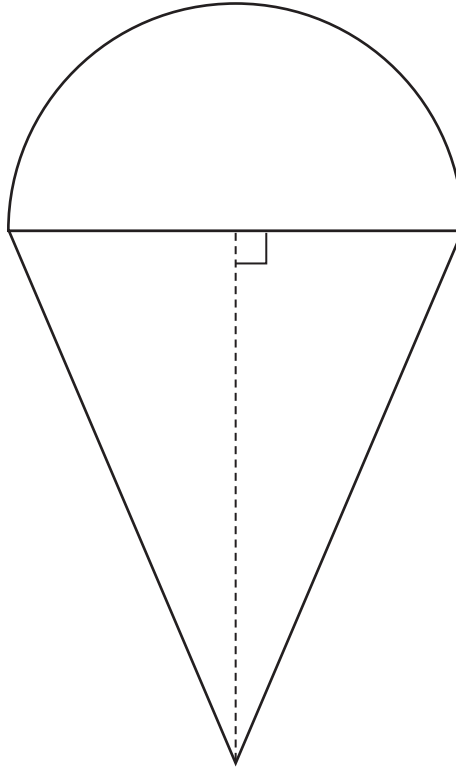Which measurement is closest to the area of the shaded region in square inches?

a. 615 in.^{2}

b. 462 in.^{2}

c. 88 in.^{2}

d. 308 in.^{2}

5. This figure was created using a triangle and a semicircle, as shown below.
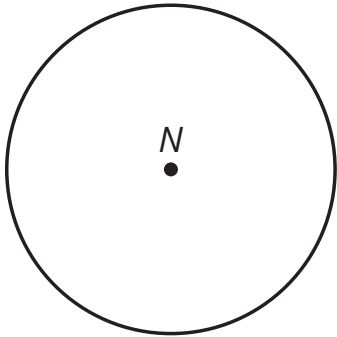
Use a ruler to measure the dimensions of the triangle and semicircle to the nearest centimeter. Which measurement is closest to the area of the figure in square centimeters? Use 3.14 for π.

a. 77.52 cm^2

b. 49.26 cm^2

c. 38.76 cm^2

d. 35.13 cm^2

Part B: Open-Response Questions

6. Write an expression that is equivalent to π using the given information.

The circumference of Circle *N* is 94.2 centimeters.

7. Calculate the circumference of a circle with a radius of 17 inches. Use 3.14 for π. Round answer to the nearest hundredth, if necessary.

8. Calculate the diameter of a circle with a circumference of 25 feet. Use 3.14 for π. Round answer to the nearest hundredth, if necessary.

9. Calculate the area of a circle with a radius of $2\frac{2}{5}$ feet. Use 3.14 for π. Round answer to the nearest hundredth, if necessary.

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10. Amy and Brian want to fence in a circular portion of their backyard for a play space for their children. Determine the area of the circular portion of the yard that they can enclose with 30π feet of fencing. Leave your answer in terms of π.

11. Johanna is selling cheese at the farmers' market. One wheel of cheese has a diameter of 9 inches.

   a. Calculate the area of the wheel of cheese.

   b. If the 9-inch wheel of cheese costs $18.60, what is the cost per square inch?

12. Jackson High School is building a new running track. The track is constructed from a rectangle and two semicircles.

102 ft

500 ft
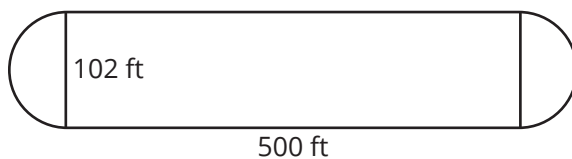
The inside of the track will all be grass. Determine the area of grass needed to fill in the track. Use 3.14 for π. Round to the nearest whole number.
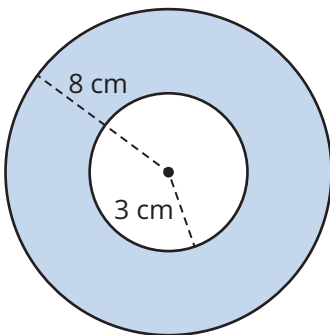
Part C: Griddable Response Questions

Record your answer and fill in the bubbles. Be sure to use the correct place value.

13. Justina wants to buy a cover for the top of her circular pool, but she doesn't know the area. If the diameter of the pool is 20 feet, what is the area of the pool? Use 3.14 for π.

14. Jeremy plants flowers in a circular bed, represented by the unshaded circle in the diagram. He builds a circular patio around the flowers, represented by the shaded portion of the diagram. Both circles share the same center. What is the area of the patio? Use 3.14 for π.

8 cm
3 cm