

TEST NAME: **Circle Test - 7G4**  
TEST ID: **2255200**  
GRADE: **07 - Seventh Grade**  
SUBJECT: **Mathematics**  
TEST CATEGORY: **School Assessment**

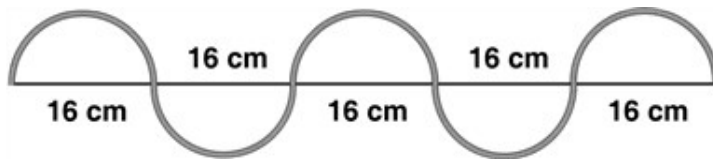
03/28/18, Circle Test - 7G4

Student: \_\_\_\_\_

Class: \_\_\_\_\_

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

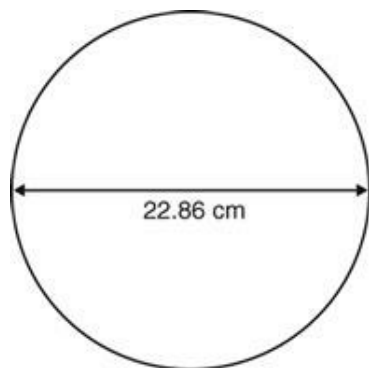
1. The diameter of a bike's wheel is 16 inches. How many times will the wheel turn by the time the bike has gone 1 mile? Record your answer to the nearest whole number. (Use  $\pi \approx 3.14$ )
2. Tracy designed the following piece of art using a length of string and a very thin rod. She shaped the string using a semi-circular pattern.



How much longer, in centimeters, is the string than the rod? (Use  $\pi \approx 3.14$ )

3. Rasheed's dog is on a leash in the yard. With the leash attached to a pole in the center of the yard, his dog has a total play area of  $144\pi \text{ ft}^2$ . What is the length of the dog's leash?
  - A. 4 ft
  - B. 8 ft
  - C. 12 ft
  - D. 72 ft

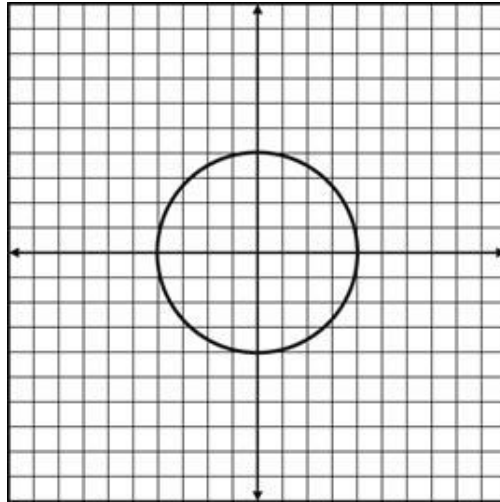
4. A paper plate has a diameter of 22.86 centimeters.



What is the approximate area of the paper plate? (Use  $\pi = 3.14$ .)

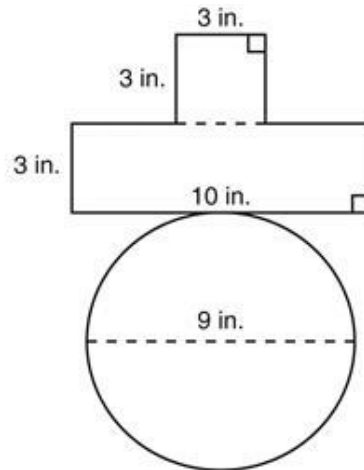
- A.  $35.89 \text{ cm}^2$
  - B.  $71.78 \text{ cm}^2$
  - C.  $410.22 \text{ cm}^2$
  - D.  $1640.90 \text{ cm}^2$
5. What is the area of a circle that has a circumference of  $12\pi$ ?
- A.  $6\pi$  square units
  - B.  $24\pi$  square units
  - C.  $36\pi$  square units
  - D.  $144\pi$  square units

6. What is the approximate circumference of the circle shown?



- A. 25 units
- B. 50 units
- C. 25 square units
- D. 50 square units

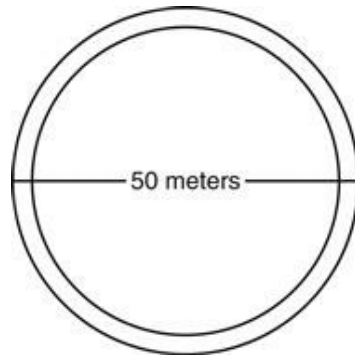
7. What is the approximate total area, in square inches, of the figure below? Use 3.14 for  $\pi$ .



Note: The figure is not drawn to scale.

- A. 60.3
- B. 67.3
- C. 95.6
- D. 102.6

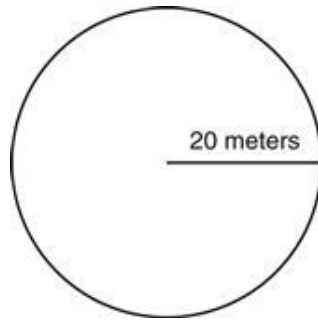
8. An athlete runs around the track shown at an average speed of 8 meters per second.



Approximately how many seconds will it take the athlete to go around the track one time?

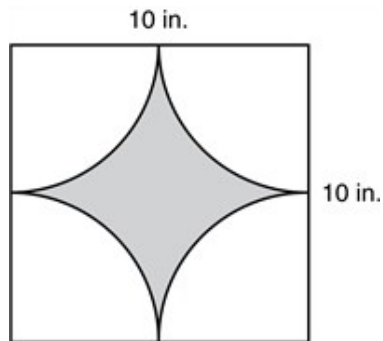
- A. 6
  - B. 20
  - C. 245
  - D. 1256
9. A circle is made with 255 square centimeters of material. What is the largest possible diameter the circle can have?
- A. 9 cm
  - B. 16 cm
  - C. 18 cm
  - D. 81 cm
10. Which of the following is true for a circle with a circumference of approximately 100 feet?
- A. The diameter is 16 feet and the area is 804 square feet.
  - B. The radius is 16 feet and the area is 804 square feet.
  - C. The diameter is 16 feet and the area is 804 feet.
  - D. The radius is 16 feet and the area is 804 feet.

11. A farmer grows potatoes on a circular plot of land that has a radius of 20 meters.



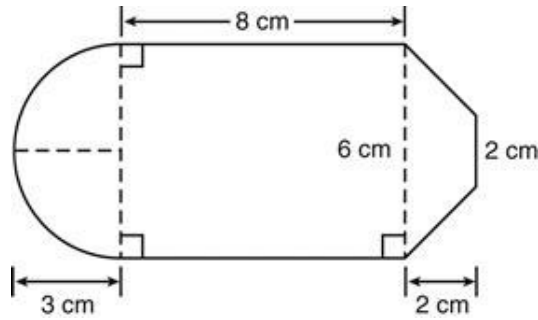
Each potato plant requires 2 square meters of soil. What is the maximum number of potato plants the farmer can grow?

- A. 80
  - B. 628
  - C. 1256
  - D. 2512
12. Which is closest to the area of the shaded region inside the square? Use 3.14 for  $\pi$ .



- A. 21.5 square inches
- B. 31.4 square inches
- C. 78.5 square inches
- D. 100 square inches

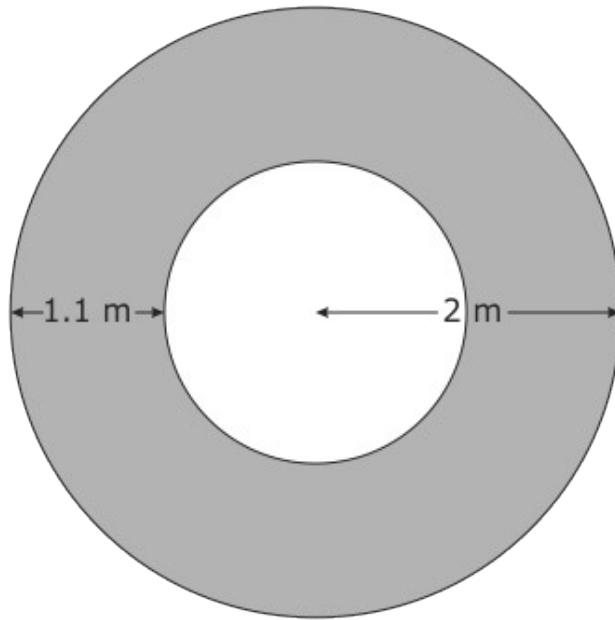
13. The figure below was formed by joining a semicircle, a rectangle, and an isosceles trapezoid.



Which is closest to the area of the figure? Use 3.14 for  $\pi$ .

- A. 62.13 square centimeters
  - B. 70.13 square centimeters
  - C. 78 square centimeters
  - D. 84.26 square centimeters
14. What is the **approximate** circumference of the circle that has a center at  $(2, 1)$  and passes through the point  $(2, 5)$ ?
- A. 8 units
  - B. 13 units
  - C. 25 units
  - D. 50 units

15. What is the **approximate** area of the shaded region in the figure below?



- A.  $10.0 \text{ m}^2$
- B.  $8.8 \text{ m}^2$
- C.  $2.8 \text{ m}^2$