

Unit 3: Measuring Circles

ADVANCED

Name: _____ Date: _____

Show all your work. Use the value of pi stated in each problem, and give each answer as a single number.

1. A circle has radius 14 cm. Using $\pi = 22/7$, find its area in cm^2 .

Answer: _____

3. A circle has area 154 cm^2 . Using $\pi = 22/7$, find its diameter in cm.

Answer: _____

5. A flat ring (annulus) has outer radius 10 cm and inner radius 6 cm. Using $\pi = 3.14$, find the area of the ring in cm^2 .

Answer: _____

7. A quarter-circle has radius 12 cm. Using $\pi = 3.14$, find the area of the quarter-circle in cm^2 .

Answer: _____

9. A circle has circumference 62.8 cm. Using $\pi = 3.14$, find its area in cm^2 .

Answer: _____

11. A wheel has radius 35 cm. Using $\pi = 22/7$, how many complete revolutions does it make to travel 880 cm?

Answer: _____

2. A circle has circumference 44 cm. Using $\pi = 22/7$, find its radius in cm.

Answer: _____

4. A semicircle has radius 10 cm. Using $\pi = 3.14$, find the perimeter of the semicircle (curved part plus the straight diameter) in cm.

Answer: _____

6. A circle has diameter 25 m. Using $\pi = 3.14$, find its circumference in m.

Answer: _____

8. Circle A has radius 3 cm and Circle B has radius 9 cm. Find the ratio of the area of Circle A to the area of Circle B, in simplest form.

Answer: _____

10. A circle has area 78.5 cm^2 . Using $\pi = 3.14$, find its circumference in cm.

Answer: _____

12. A circle is inscribed inside a square of side 14 cm (the circle just touches all four sides). Using $\pi = 22/7$, find the area inside the square but outside the circle, in cm^2 .

Answer: _____