

Name: _____

Date: _____

Aim: How can we go from Area to Circumference and Circumference to Area?

Circumference → Area

1. The circumference of a circle is 11π inches. What is the area, in square inches, of the circle?
Express your answer in terms of pi.

2. The circumference of a circle is 74 cm. Find the area of the circle. Round to the nearest whole.

Area → Circumference

1. The area of a circle is 196π square yards. Find the circumference of the circle.
Express your answer in terms of pi.

2. The area of a circle is 100 square meters. Find the circumference of the circle. Round all values to the nearest tenth.

Practice Questions

3. What is the radius, in centimeters, of a circle that has a circumference of 16π centimeters?
A. 8 B. 16 C. 32 D. 64

4. The circumference of a circle is 15π centimeters. What is the area of the circle in terms of π ?
A. $7.5\pi \text{ cm}^2$ B. $15\pi \text{ cm}^2$ C. $56.25\pi \text{ cm}^2$ D. $225\pi \text{ cm}^2$

5. The radius of Earth is 6,371.0 kilometers and the radius of Earth's Moon is 1,737.5 kilometers. What is the approximate difference in the circumferences, in kilometers, of Earth and Earth's Moon? Round your answer to the nearest tenth.

A. 40,030.2

B. 29,113.1

C. 14,556.6

D. 10,917.0

6. Jack used wire fencing to form a border around a circular region in his backyard. If the radius of the circular region was 5 yards, what was the total length of the board, rounded to the nearest tenth of a yard?

A. 15.7

B. 31.4

C. 78.5

D. 157.1

7. A circle has a diameter of 26 units. What is the area of the circle to the nearest hundredth of a square unit?

Applications

8. A map of a public park shows a circular pond. There is a bridge along a diameter of the pond. You walk across the bridge, while your friend walks halfway around the pond to meet you at the other side of the bridge. If your friend walks .4 miles, how far did you walk? Round your distance to the *nearest hundredth*.

9. Mike wants to make a backdrop for the school play in the shape of a semi-circle. He wants to hang lights around the entire perimeter of figure. He knows the area of the figure is about 100.5 square feet. About how many feet of lighting will he need? During the problem, round all values to the *nearest tenth*, including your final answer.



10. The diameter of circle A is 10m. If the diameter of circle B is 20% larger than the diameter of circle A, what is the difference in the area between circle A and circle B?