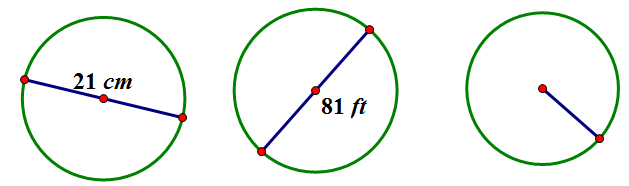
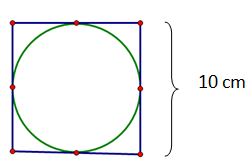
Lesson 17: The Area of a Circle

Problem Set

1. The following circles are not drawn to scale. Find the area of each circle. (Use as an approximation for )



1. A circle has a diameter of inches.
   1. Find the exact area, and find an approximate area using .
   2. What is the circumference of the circle using ?
2. A circle has a diameter of inches.
   1. Find the exact area and an approximate area using .
   2. What is the circumference of the circle using ?
3. Using the figure below, find the area of the circle.



1. A path bounds a circular lawn at a park. If the inner edge of the path is around, approximate the amount of area of the lawn inside the circular path. Use .
2. The area of a circle is . Find its circumference.
3. Find the ratio of the area of two circles with radii and .
4. If one circle has a diameter of and a second circle has a diameter of , what is the ratio of the area of the larger circle to the area of the smaller circle?
5. Describe a rectangle whose perimeter is and whose area is less than . Is it possible to find a circle whose circumference is and whose area is less than ? If not, provide an example or write a sentence explaining why no such circle exists.
6. If the diameter of a circle is double the diameter of a second circle, what is the ratio of area of the first circle to the area of the second?