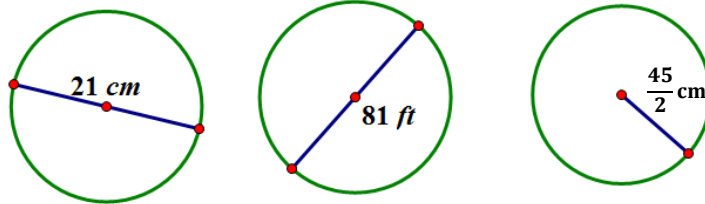
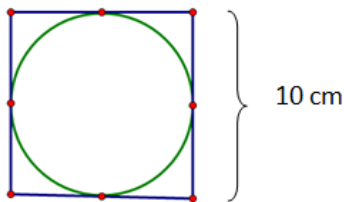


Problem Set

1. The following circles are not drawn to scale. Find the area of each circle. (Use $\frac{22}{7}$ as an approximation for π .)



2. A circle has a diameter of 20 inches.
- Find the exact area, and find an approximate area using $\pi \approx 3.14$.
 - What is the circumference of the circle using $\pi \approx 3.14$?
3. A circle has a diameter of 11 inches.
- Find the exact area and an approximate area using $\pi \approx 3.14$.
 - What is the circumference of the circle using $\pi \approx 3.14$?
4. Using the figure below, find the area of the circle.



5. A path bounds a circular lawn at a park. If the inner edge of the path is 132 ft. around, approximate the amount of area of the lawn inside the circular path. Use $\pi \approx \frac{22}{7}$.
6. The area of a circle is $36\pi \text{ cm}^2$. Find its circumference.
7. Find the ratio of the area of two circles with radii 3 cm and 4 cm.
8. If one circle has a diameter of 10 cm and a second circle has a diameter of 20 cm, what is the ratio of the area of the larger circle to the area of the smaller circle?
9. Describe a rectangle whose perimeter is 132 ft. and whose area is less than 1 ft^2 . Is it possible to find a circle whose circumference is 132 ft. and whose area is less than 1 ft^2 ? If not, provide an example or write a sentence explaining why no such circle exists.
10. 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?