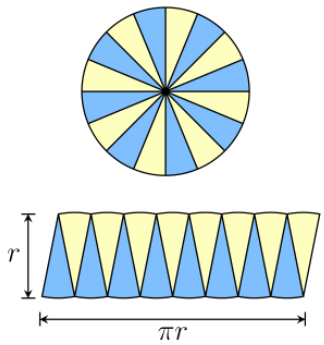
Pre-Algebra

Aim: How do you find the Area of a circle?

Where did the formula for calculating the area of a circle come from?

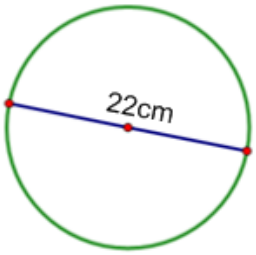


Circumference Formula

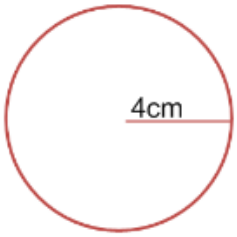
Area Formula

1. Find the area of the following circles.

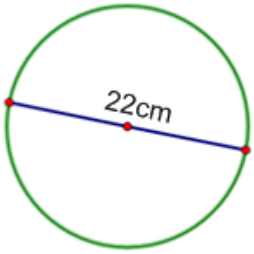
a. Calculate your answer to the nearest tenth.



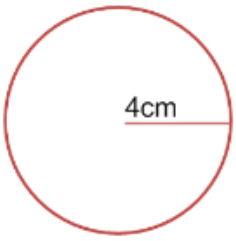
b. Calculate your answer to the nearest tenth.



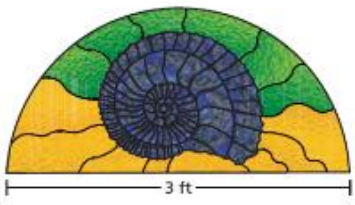
a. Leave your answer in terms of pi.



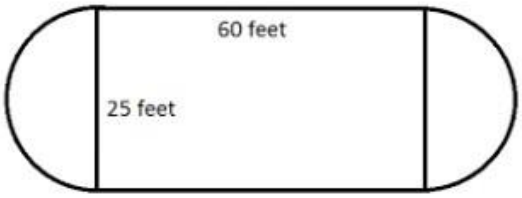
b. Leave your answer in terms of pi.



2. Find the area of each figure. Round your answer to the nearest tenth.



3. Luis is going to put a basketball court in his backyard, as shown in the diagram below. This basketball court consists of a rectangle and a semicircle at each end.



a. To the nearest square foot, represent the area of this basketball court.

b. To the nearest foot, represent the distance around this basketball court.

Working Backwards

4. A circle's circumference is 30 meters.
   a. What is the diameter?
   b. What is the radius?

5. A circle's circumference is 30meters.
   a. What is the diameter?
   b. What is the radius?

6. A circle's area is 81π square cm. Find the measure of the circle's diameter.

7. The area of a circle is 59 square feet. To the nearest tenth, what is the radius of the circle?

Circumference → Area

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

Area → Circumference

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