## Going Around in Circles

1. If a bicycle wheel has a diameter of 26 in., how far has the bike traveled when the wheel has completed 1000 revolutions?

2. The turning circle of a certain automobile is 50 meters. What is the radius of the turning circle?

3. If the tire of a car turns 150 times as it travels 300 m, what is the radius of the tire?

4. A satellite traveling in a circular orbit 800 miles above the earth completes an orbit in 2 hours. If the radius of the earth is about 4000 miles, how fast is the satellite traveling?

5. The radius of the earth is approximately 4000 miles (1 mile = 5280 feet). Assume the surface is smooth, and a band is wrapped tightly around the equator. If the length of the band is increased by 10', how much space will be between the earth's surface and the band?

6. You (Y) and your friend (F) are having a race on a circular racetrack. If you are on the outer track, where should you be at the start of the race?
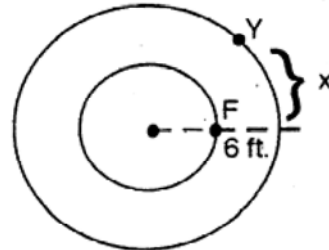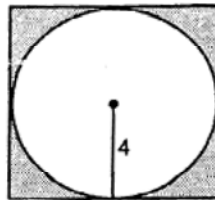
For Problems 7 - 11, find the area of the shaded regions.
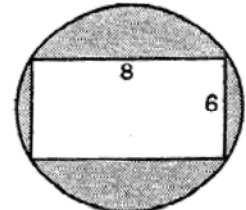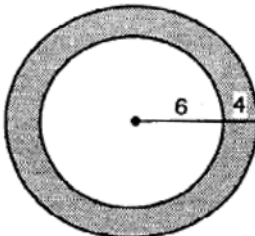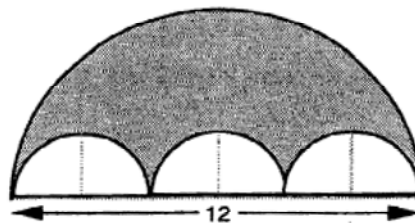
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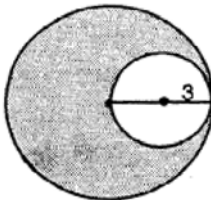
8.

9.

10.

11. Find the shaded area; compare one small half-circle to the large half-circle. What do you observe, and how does this relate to the radii?

Scrambled answers: 1.59, 13.73, 0.32
81681.41, 37.71, 30.54, 30159.29, 7.96
84.82, 37.7, 201.06