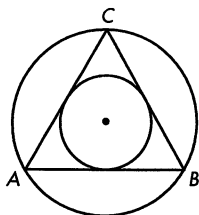
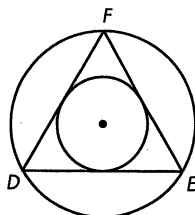


In Exercises 12-14, find the area of each equilateral triangle. Find the area of the inscribed circle. Find the area of the circumscribed circle. The area of the circumscribed circle is how many times as great as the area of the inscribed circle?

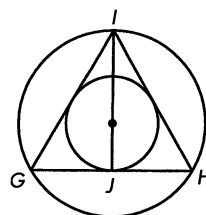
12.* $AB = 6$ cm



13. $DE = 2\sqrt{3}$ cm



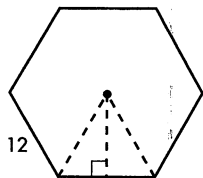
14.* $IJ = 9\sqrt{3}$ cm



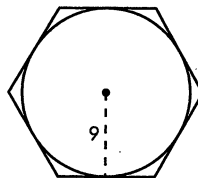
15.* The circle-packing efficiency of a square was calculated in Chapter 9 to be about 78.5%. What is the circle-packing efficiency of an equilateral triangle? That is, the area of a circle inscribed within an equilateral triangle is what percentage of the area of the equilateral triangle?

16.* The area of equilateral $\triangle REG$ is $25\sqrt{3}$ m². Find the perimeter of $\triangle REG$.

17. Find the area of a regular hexagon with each side measuring 12 cm.

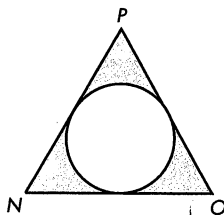


18.* Find the area of a regular hexagon circumscribed about a circle with a radius of 9 inches.

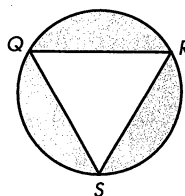


In Exercises 19 and 20, each triangle is equilateral. Find the shaded area in each figure to the nearest square centimeter.

19.* $NP = 12$ cm



20. $QS = 12$ cm



21. What is the area of a circle that circumscribes an isosceles right triangle whose legs measure 8 cm?