# Chapter Test

Find the area of each figure described.

1. A circle with diameter 10
2. A square with diagonal 4 cm
3. An isosceles right triangle with hypotenuse $6\sqrt{2}$
4. A circle with circumference 30π m
5. A rhombus with diagonals 5 and 4
6. An isosceles trapezoid with legs 10 and bases 6 and 22
7. A parallelogram with sides 6 and 10 that form a 30° angle
8. A regular hexagon with apothem $2\sqrt{3}$ cm
9. Sector AOB of $\odot O$ with radius 4 and $m\overarc{AB} = 45$
10. A rectangle with length 12 inscribed in a circle with radius 7.5
11. A sector of a circle with radius 12 and arc length 10π
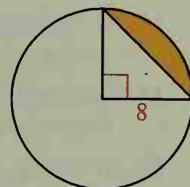12. A square with radius 9

Find the area of each shaded region.

13.
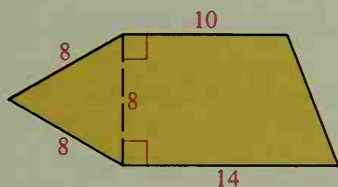
14.
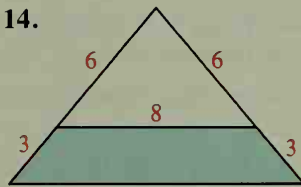
15.

16. The areas of two circles are 100π and 36π. Find the ratio of their radii and the ratio of their circumferences.
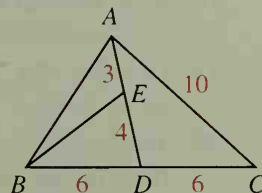
17. Two regular pentagons have sides of 14 m and 3.5 m, respectively. Find their scale factor and the ratio of their areas.

18. In the diagram of $\odot Q$, $m\overarc{ABC} = 288$ and $QA = 10$.
    a. Find the circumference of $\odot Q$.
    b. Find the length of $\overarc{AC}$.
    c. Find the area of sector AQC.
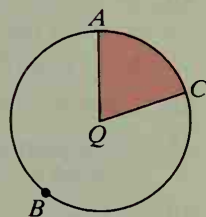
Ex. 18

19. A point is randomly chosen on $\overline{AD}$. Find the probability that the point is on $\overline{AE}$.

20. A point is randomly chosen inside $\triangle ABC$. What is the probability that the point is inside:
    a. $\triangle ABD$?   b. $\triangle BDE$?

Exs. 19, 20