

2.5

Find the measure of a central angle of a regular polygon with the given number of sides.

4. 12 sides **5.** 15 sides **6.** 25 sides

Find the perimeter and area of the regular polygon shown.



Solve.

32

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- **11.** What is the area of an equilateral triangle with radius 15 cm?
- **12.** What is the area of a regular hexagon with apothem 7.5 inches?
- **13.** What is the area of a square with a diagonal 6.3 cm?
- **14.** What is the approximate side length of a regular hexagon with area 100 square centimeters?

Decide whether the statement is *always, sometimes,* or *never* true.

- **15.** If the number of sides of a regular polygon is *n*, then the measure of the central angle is $360^\circ \div n$.
- **16.** The radius of a regular polygon is greater than the apothem.
- 17. The radius of a regular hexagon of radius r is six times greater than the area of a regular triangle of radius r.
- **18.** The area of a regular hexagon of radius r is six times greater than the area of a regular triangle of radius r.

Use the diagram shown to answer the following.

- **19.** What is the area of one regular triangle?
- **20.** What is the area of one regular hexagon?
- **21.** What percent of the tiling is shaded?
- **22.** The cost of ceramic tiling is \$0.025 per square inch. What would be the cost of the design shown?



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7. 32 sides