5.

   Can a parallelogram with a 100° angle be inscribed in a circle?

7.

   a. If a rhombus is inscribed in a circle, what must be true about the rhombus?

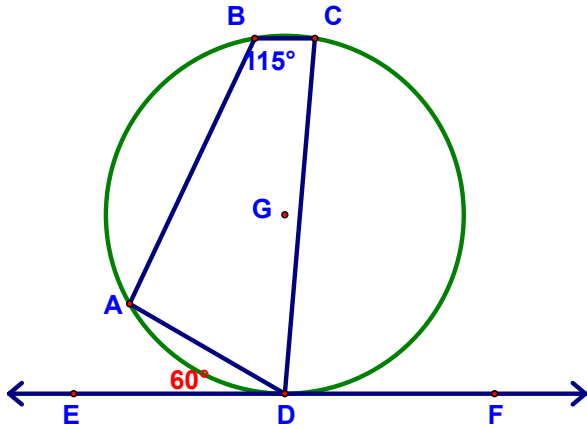   **b. If a trapezoid is inscribed in a circle, what must be true about the trapezoid?**

8.

   Prove that the bisector of an ∠ of an inscribed △ also bisects the arc cut off by the opposite side.

Statements	**Reasons**

9.

$\overline{BC} \parallel \overline{EF}$
$m\overset{\frown}{AD} = 60°$
$m\angle B = 115°$

Find

a. m∠ADC

115°

b. m∠CDF

c. m∠C

60°

d. m∠A

10.

Find PS
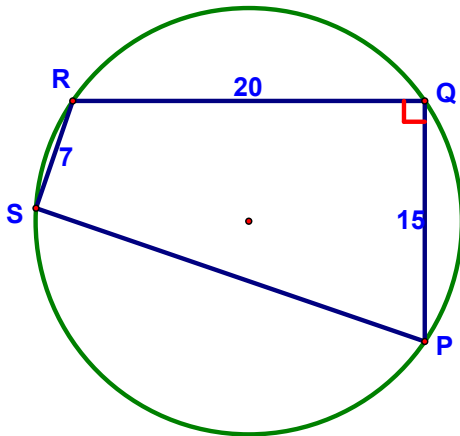
11.

Trapezoid WXYZ is circumscribed about ⊙O. ∠X & ∠Y are right ∠s, XW = 16, and YZ = 7. Find the perimeter of WXYZ.
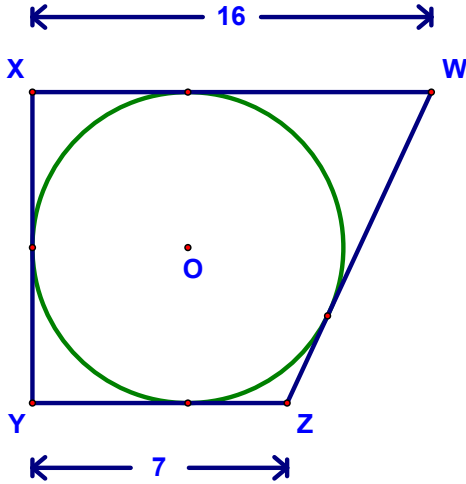
15.

Find m ∠Q
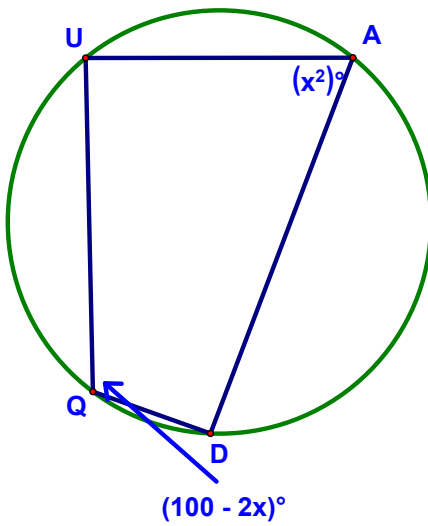
16.

EFGH is a parallelogram with JO = 6 and $m\overset{\frown}{HG}$ = 120°. Find the perimeter of EFGH.
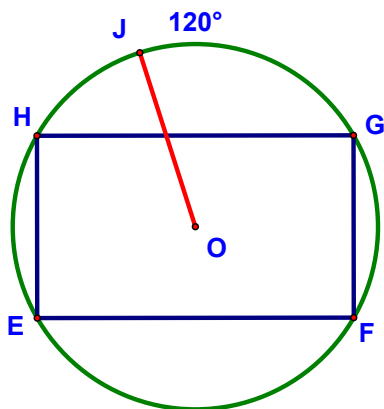
19.

**Equilateral △PQR is inscribed in one circle and circumscribed about another circle. The circles are concentric.**

   a. If the radius of the smaller ⊙ is 10, find the radius of the larger circle.

   b. In general, for any equilateral △, what is the ratio of the radius of the inscribed ⊙ to the radius of the circumscribed ⊙.
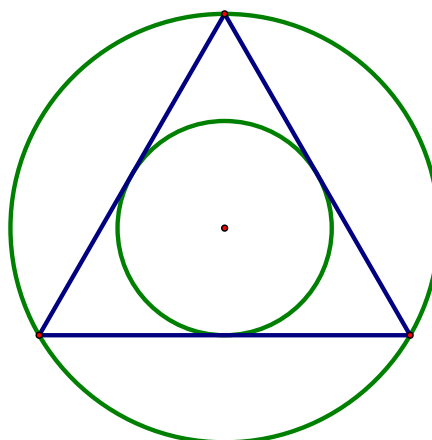
20.

ABCD is a kite with $\overline{AB} \cong \overline{BC}$, $\overline{AD} \cong \overline{CD}$, and m∠B = 120°. The radius of the circle is 3.   Find the perimeter of ABCD.
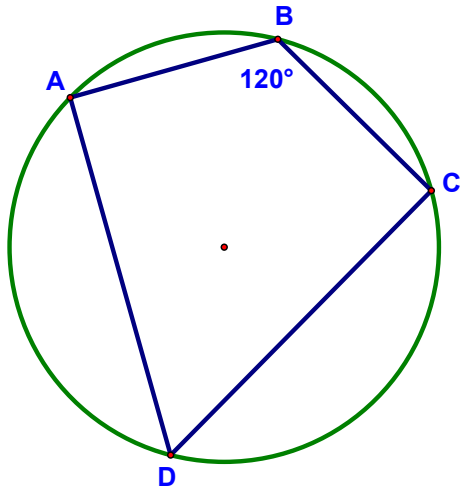
23.

Are the vertices of each figure concyclic (e.g., lie on the same circle) Always, Sometimes, or Never?

      a. Rectangle

      b. Parallelogram

      c. Rhombus

      d. Nonisosceles trapezoid

      e. Equilateral polygon

      f. Equiangular polygon

24.

A right △ has legs measuring 5 and 12. Find the ratio of the area of the inscribed ⊙ to the area of the circumscribed ⊙.

26.

A circle is inscribed in a triangle with sides 8, 10, and 12. The point of tangency of the 8-unit side divides that side in the ratio x:y where x < y. Find that ratio.