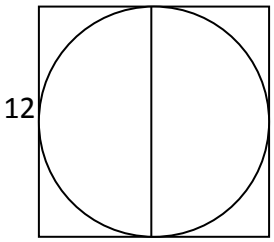
Answer on Question #63946 – Math – Geometry

Question

Find the dimensions of the largest circle that can be inscribed in a square of 12 inches.

Solution



The parameters of the circle are the radius, the diameter, the circumference and the area of the circle.
The side of the square is equal to the diameter of the circle:

$$d = 12.$$

Then the radius of the circle is

$$r = \frac{d}{2},$$
$$r = \frac{12}{2} = 6.$$

The circumference is

$$C = 2\pi r,$$
$$C = 2\pi \cdot 6 = 12\pi.$$

The area of the circle is

$$A = \pi r^2,$$
$$A = \pi \cdot 6^2 = 36\pi.$$

Answer: $d = 12, r = 6, C = 12\pi, A = 36\pi.$