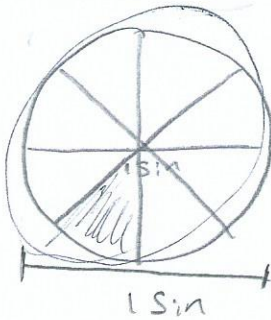


$$SA = \% \cdot \pi \cdot r^2$$

13. A circular pizza with a diameter of 15 inches is cut into 8 equal slices. What is the area of one slice?

- A. 5.9 sq. in.
 B. 22.1 sq. in.
 C. 88.4 sq. in.
 D. 120 sq. in.



First find Area of Pizza

$$A = \pi \cdot r^2 \rightarrow \pi \cdot 7.5^2$$

$$A = 176.71 \text{ in}^2$$

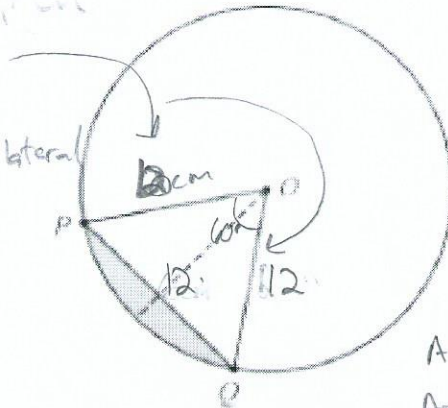
Now multiply by percentage you want which is 1 slice out of 8

$$\text{so } \frac{1}{8} \cdot 176.71 = \boxed{22.08 \text{ in}^2}$$

14. In this diagram, triangle OPQ is equilateral, with vertex O at the center of a circle and vertices P and Q on the circle.

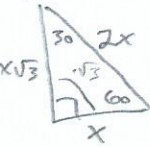
If diameter is 24 cm radius is 12 cm

because OPQ is equilateral PQ is also 12 and $\angle POQ$ is 60°



find area of triangle and sector and subtract

$$\text{sector} = \frac{60}{360} \cdot \pi \cdot 12^2 = 24\pi$$



$$A = \frac{1}{2} \cdot b \cdot h$$

$$A = \frac{1}{2} \cdot 12 \cdot 6\sqrt{3} = 36\sqrt{3}$$

$$\text{so } \boxed{24\pi - 36\sqrt{3}}$$

The radius of circle O is 12 cm. What is the area, in square units, of the shaded region?

- A. $24\pi - 18$
 B. $24\pi - 36\sqrt{3}$
 C. $48\pi - 18$
 D. $48\pi - 36\sqrt{3}$

15. A sphere has a volume of 39π cubic centimeters. What is the surface area of the sphere?

- A. 3.0π sq. cm
 B. 0.5π sq. cm
 C. 38.0π sq. cm
 D. 81.5π sq. cm

$$V = \frac{4}{3} \pi \cdot r^3 \quad SA = 4\pi r^2$$

We know Volume so solve back to find radius. once you find radius plug in to find surface area.

$$\frac{39\pi}{\pi} = \frac{4}{3} \frac{\pi \cdot r^3}{\pi} \quad \text{divide by } \pi$$

$$39 = \frac{4}{3} r^3 \quad \rightarrow \sqrt[3]{29.25} = \sqrt[3]{r^3} \quad r = 3.08$$

$$\rightarrow SA = 4\pi (3.08)^2$$

$$\boxed{37.9\pi}$$