

Name Key

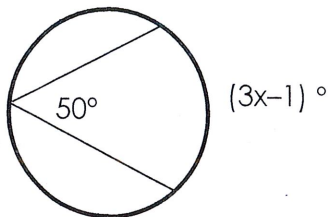
1) $x =$ _____

$$L = \frac{A}{2}$$

$$50 = \frac{3x-1}{2}$$

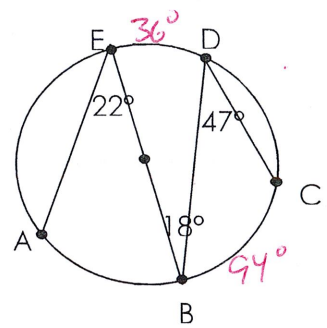
$$100 = 3x-1$$

$$101 = 3x$$



$$33.67 = x$$

2) $m\widehat{DC} = 50^\circ$



$$\begin{array}{r} 36 \\ + 94 \\ \hline 130 \\ - 130 \\ \hline 50 \end{array}$$

3) A pie is sliced into 12 equal slices. The arc length of one slice is 6 inches. What is the diameter of the pie?

$$\frac{360}{12} = 30$$

$$\frac{m}{360} = \frac{l}{2\pi r}$$

$$\frac{30}{360} = \frac{6}{2\pi r}$$

$$60\pi r = 2160$$

$$\pi r = 36$$

$$r = 11.46$$

$$11.46 \times 2$$

$$22.92 \text{ in} = d$$

4) Find the area of a circle with a circumference of 216 ft.

$$C = 2\pi r$$

$$216 = 2\pi r$$

$$108 = \pi r$$

$$34.38 = r$$

$$A = \pi r^2$$

$$A = \pi 34.38^2$$

$$A = 3713.31 \text{ ft}^2$$

5) The Great Circle in a sphere has a circumference of 42π cm. Find the surface area of the sphere.

$$C = 2\pi r$$

$$42\pi = 2\pi r$$

$$21\pi = \pi r$$

$$21 = r$$

$$S = 4\pi r^2$$

$$S = 4\pi 21^2$$

$$S = 1764\pi \text{ cm}^2$$

$$\approx 5541.77$$

6) The volume of a sphere is 380 m^3 . Find the radius.

$$V = \frac{4\pi r^3}{3}$$

$$380 = \frac{4\pi r^3}{3}$$

$$1140 = 4\pi r^3$$

$$285 = \pi r^3$$

$$90.72 = r^3$$

$$\sqrt[3]{90.72} = r$$

$$4.49 \text{ m} = r$$

7) A beach ball is inflated in a cubic box until it is just touching all of the sides. If the box has a volume of 216 in^3 , what is the volume of the beach ball?

$$V = s^3$$

$$216 = s^3$$

$$\sqrt[3]{216} = \sqrt[3]{s^3}$$

$$6 = s$$

$$V = \frac{4\pi r^3}{3}$$

$$V = \frac{4\pi 3^3}{3}$$

$$V = 36\pi \approx 113.10 \text{ in}^3$$

8) In a circle, the arc length of a sector is 12 in and its intercepted arc has a measure of 65° . Find the diameter of the circle.

$$\frac{m}{360} = \frac{l}{2\pi r}$$

$$130\pi r = 4320$$

$$\frac{65}{360} = \frac{12}{2\pi r}$$

$$\pi r = 33.23$$

$$r = 10.58 \times 2 = 21.16 \text{ in} = d$$

9) The arc length of a sector is 5.4 inches and the radius is 2 inches. Find the degree measure of the sector.

$$\frac{m}{360} = \frac{l}{2\pi r}$$

$$4\pi m = 1944$$

$$\frac{m}{360} = \frac{5.4}{2\pi 2}$$

$$\pi m = 486$$

$$m = 154.70^\circ$$

10) What is the volume of a sphere with a radius of 12.9 feet?

$$V = \frac{4\pi r^3}{3}$$

$$V = 8992.03 \text{ ft}^3$$

$$V = \frac{4\pi 12.9^3}{3}$$

11) Find the radius of a sphere with a surface area of 318 in^2 .

$$S = 4\pi r^2$$

$$25.31 = r^2$$

$$318 = 4\pi r^2$$

$$5.03 \text{ in} = r$$

$$79.5 = \pi r^2$$

Additional Topics for Review:

- Circle vocabulary
- Eye height, Angle of Elevation/Depression, #16 & 17 from Unit 8
- Listen to some good music.