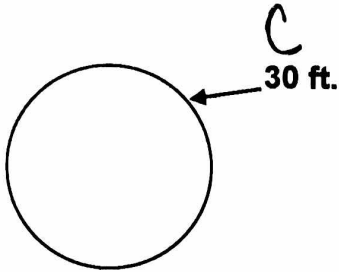


# U12 Problem Set 3 - Circumference Backwards

#1-3 Answer the following questions. Show all work!

- 1.) Find the **radius** of the circle below. Round to the nearest tenth.



$$C = 2\pi r$$

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

$$\frac{15}{\pi} = \frac{\pi r}{\pi}$$

$$4.\underline{7}74648293 = r$$

radius = 4.8 ft

- 2.) The circumference of a circle is 14 meters. What is the **radius** of the circle? Round to the nearest tenth. Use 3.14 for  $\pi$ .

$$C = 2\pi r$$

$$14 = 2(3.14)r$$

$$\frac{14}{6.28} = \frac{6.28r}{6.28}$$

$$\frac{2.229299363}{1} = r$$

radius = 2.2 m

$$2.\underline{2}29299363 = r$$

- 3.) Jordan sews a lace border  $50\pi$  inches long around the <sup>circumference</sup> edge of a circular table cloth. What is the length of the **radius** and **diameter** of the circular table cloth?

$$C = 2\pi r$$

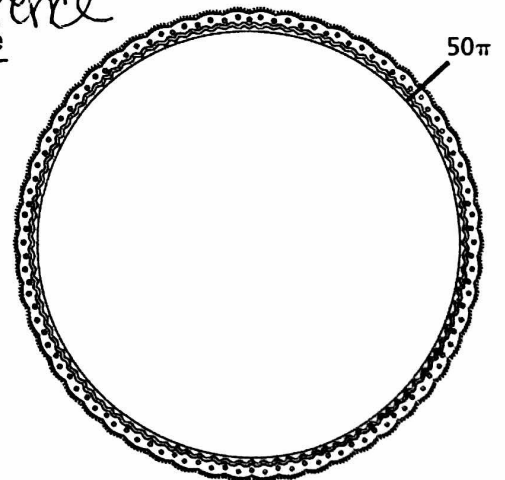
$$\frac{50\pi}{2} = \frac{2\pi r}{2}$$

$$\frac{25\pi}{\pi} = \frac{\pi r}{\pi}$$

$$25 = r$$

radius = 25 in      diameter = 50 in

$$d = 2r$$



[not drawn to scale]

circumference =  $2\pi r$

## Review It!

#4-7 Calculate the following.

4.) Given: radius ( $r$ ) = 8 in, find the diameter ( $d$ )  $2(8)$   $d = \underline{16}$  in.

5.) Given: diameter ( $d$ ) = 5.2 in, find the radius ( $r$ )  $5.2 \div 2$   $r = \underline{2.6}$  in.

6.) Given: radius ( $r$ ) = 9.7 in, find the diameter ( $d$ )  $2(9.7)$   $d = \underline{19.4}$  in.

7.) Given: diameter ( $d$ ) = 2 in, find the radius ( $r$ )  $2 \div 2$   $r = \underline{1}$  in.

8.) Find the circumference of a circle whose diameter is 14 inches. Round your answer to the nearest hundredth. **Show your work.**

$$r = 7$$
$$C = 2\pi r$$
$$C = 2\pi(7)$$
$$C = 43.98229715$$
$$C = \underline{43.98 \text{ in}}$$

## Flashback!

9.) Monica reads  $7\frac{1}{2}$  pages of a mystery book in 9 minutes. What is her average reading rate in pages per minute? **Show your work.**

$$\frac{\text{pages}}{\text{min}} \quad \frac{7\frac{1}{2}}{9} \rightarrow 7\frac{1}{2} \div 9 = \underline{\frac{5}{6} \text{ pages per min}}$$