

Name Key

HOMEWORK : Circumference and Area of Circles (Unit 8 - Math 7)

- Remember $\pi \approx 3.14$ or $\pi \approx \frac{22}{7}$
- Write formulas and solve. Show work!
- Draw pictures.

1. A coffee cup has a diameter of $3\frac{1}{2}$ inches. What is its circumference? $d = 3.5 \text{ in}$

$$C = \pi \cdot d$$

$$3.14 \cdot 3.5 \text{ in} = 10.99 \text{ in}$$

2. A circle has a diameter of $4\frac{3}{10}$ inches. What is the circumference? Round your answer to the nearest tenth. $d = 4.3 \text{ in}$

$$C = \pi d$$

$$3.14 \cdot 4.3 \text{ in} = 13.502 \text{ in}$$

3. What is the area of the circle if its radius is 2 cm? $r = 2 \text{ cm}$

$$A = \pi \cdot r \cdot r$$

$$3.14 \cdot 2 \cdot 2 = 12.56 \text{ cm}^2$$

4. What is the area of a circle that has a diameter of 6 cm? $d = 6 \text{ cm}$
 $r = 3 \text{ cm}$

$$A = \pi \cdot r \cdot r$$

$$3.14 \cdot 3 \cdot 3 = 28.26 \text{ cm}^2$$

5. If the area of a circle is 200.96 m^2 , then what is its diameter?

$$A = \pi r^2$$

$$\frac{200.96}{3.14} = \frac{3.14 \cdot r^2}{3.14}$$

$$64 = r^2$$

$$r = 8$$

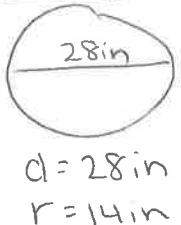
$$d = 16 \text{ cm}$$

or try different radii

6. If the area of a circle is approximately 254.34 in^2 , how long is the radius?

- a) 10 in b) 9 in c) 20 in d) 3 in
- $$3.14 \cdot 10 \cdot 10 = 314 \text{ in}^2$$
- $$3.14 \cdot 9 \cdot 9 = 254.34 \text{ in}^2$$
- $$3.14 \cdot 20 \cdot 20 = 1256 \text{ in}^2$$
- $$3.14 \cdot 3 \cdot 3 = 28.26 \text{ in}^2$$

7. If a wheel has a diameter of 28 inches, how much distance would you cover if the wheel rolled completely 8 times? (Sketch a picture)



$$C = \pi \cdot d$$

$$= 3.14 \cdot 28$$

$$= 87.92$$

$$\times 8$$

$$\hline 703.36 \text{ in}$$