

# NOTES 11.1

## CIRCUMFERENCE & AREA OF CIRCLES

CIRCUMFERENCE	$C = 2\pi r$ or $C = \pi d$
AREA	$A = \pi r^2$

**EXAMPLES:**

1. Find the circumference and area of a circle with a radius of 6.8 cm.

$$r = 6.8$$

$$C = 2\pi r$$

$$C = 2\pi(6.8)$$

$$C = 13.6\pi$$

$$A = \pi r^2$$

$$A = \pi(6.8)^2$$

$$A = 46.24\pi$$

$$C = \frac{13.6\pi \text{ cm}}$$

$$A = \frac{46.24\pi \text{ cm}^2}$$

2. Find the circumference and area of  $\odot T$  shown below.

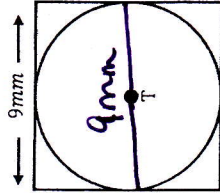
$$C = \pi d$$

$$C = \pi(9)$$

$$A = \pi r^2$$

$$A = \pi\left(\frac{9}{2}\right)^2$$

$$A = \frac{81}{4}\pi$$



$$d = 9$$

$$r = \frac{9}{2}$$

$$C = \frac{9\pi \text{ mm}}$$

$$A = \frac{81}{4}\pi \text{ m}^2$$

3. Find the circumference and area of  $\odot P$  below.

$$C = \pi d$$

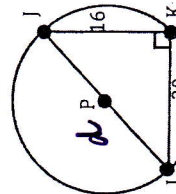
$$C = \pi(34)$$

$$A = \pi r^2$$

$$A = \pi(17)^2$$

$$C = 34\pi$$

$$A = 289\pi$$



$$d = 34$$

$$r = 17$$

4. Find the circumference and area of the circle below.

$$C = \pi d$$

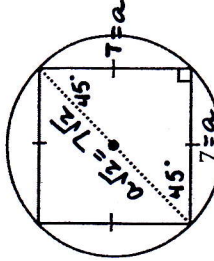
$$C = \pi(7\sqrt{2})$$

$$A = \pi r^2$$

$$A = \pi\left(\frac{7\sqrt{2}}{2}\right)^2$$

$$A = \pi\left(\frac{98}{4}\right)$$

$$A = \pi\left(\frac{49}{2}\right)$$



$$C = \frac{7\sqrt{2}\pi}{2}$$

$$A = \frac{49\pi}{2}$$

$$d = 7\sqrt{2}$$

$$r = \frac{7\sqrt{2}}{2}$$

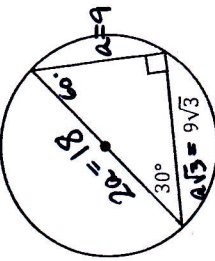
5. Find the circumference and area of the circle below.

$$C = \pi d$$

$$C = \pi(18)$$

$$A = \pi r^2$$

$$A = \pi(9)^2$$



$$C = 18\pi$$

$$A = 81\pi$$

$$d = 18$$

$$r = 9$$

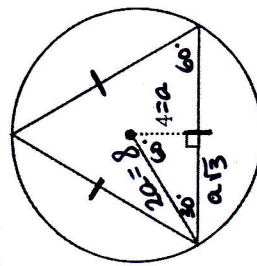
6. Find the circumference and area of the circle below.

$$C = 2\pi r$$

$$C = 2\pi(8)$$

$$A = \pi r^2$$

$$A = \pi(8)^2$$



$$C = 16\pi$$

$$A = 64\pi$$

$$r = 8$$