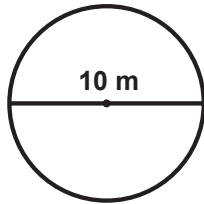


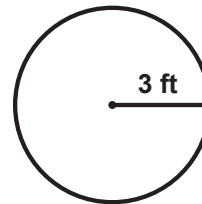
Circles: Circumference & Area

- 1** Estimate the circumference of this circle by using a rounded-off value of 3 for PI.



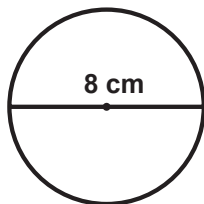
$$\begin{aligned} C &= \pi \times d \\ C &= \pi \times 10 \text{ m} \\ C &= 3 \times 10 \text{ m} \\ C &= 30 \text{ m} \end{aligned}$$

- 2** Estimate the area of this circle by using a rounded-off value of 3 for PI.



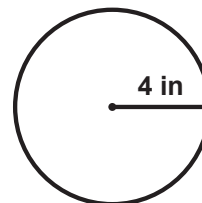
$$\begin{aligned} A &= \pi \times r^2 \\ A &= \pi \times (3\text{ft} \times 3\text{ft}) \\ A &= 3 \times 9 \text{ ft}^2 \\ A &= 27 \text{ ft}^2 \end{aligned}$$

- 3** Calculate the circumference of this circle using the more accurate value of PI = 3.14



$$\begin{aligned} C &= \pi \times d \\ C &= \pi \times 8 \text{ cm} \\ C &= 3.14 \times 8 \text{ cm} \\ C &= 25.12 \text{ cm} \end{aligned}$$

- 4** Calculate the area of this circle using the more accurate value of PI = 3.14



$$\begin{aligned} A &= \pi \times r^2 \\ A &= \pi \times (4 \times 4) \\ A &= 3.14 \times 16 \text{ in}^2 \\ A &= 50.24 \text{ in}^2 \end{aligned}$$

- 5** If the radius of a circle is 2.5 meters, what is its circumference?



$$\begin{aligned} d &= 2 \times r \\ d &= 2 \times 2.5 \text{ m} \\ d &= 5 \text{ m} \\ C &= \pi \times d \\ C &= \pi \times 5 \text{ m} \\ C &= 3.14 \times 5 \text{ m} \\ C &= 15.7 \text{ m} \end{aligned}$$

- 6** If the diameter of a circle is 22 inches, what is its area?



$$\begin{aligned} r &= d \div 2 \\ r &= 22 \div 2 \\ r &= 11 \text{ in} \\ A &= \pi \times r^2 \\ A &= \pi \times (11 \times 11) \\ A &= 3.14 \times 121 \text{ in}^2 \\ A &= 379.94 \text{ in}^2 \end{aligned}$$

- 7** A circle has a radius of 1.2 meters. Find its circumference and area. (Round answers to the nearest tenth)



$$\begin{aligned} d &= 2.4 \text{ m} \\ C &= \pi \times d \\ C &= 3.14 \times 2.4 = 7.5 \text{ m} \\ A &= \pi \times r^2 \\ A &= 3.14 \times (1.2 \times 1.2) = 4.5 \text{ m}^2 \end{aligned}$$

- 8** A circle has a diameter of 15 feet. Find its circumference and area. (Round answers to the nearest tenth)



$$\begin{aligned} r &= 7.5 \text{ ft} \\ C &= \pi \times d \\ C &= 3.14 \times 15 = 47.1 \text{ ft} \\ A &= \pi \times r^2 \\ A &= 3.14 \times (7.5 \times 7.5) = 176.6 \text{ ft}^2 \end{aligned}$$