

Finding Area given Circumference 3/7

$$\text{Circumference} = \pi \times \text{diameter} \quad \underline{\text{OR}}$$

$$\text{diameter} \times \pi$$

$$\text{Ex) } C = 12\pi \quad (\text{in terms of pi})$$

$$C = \text{diameter} \cdot \pi$$

$$d = 12 \rightarrow r = 6$$

Find the area of each circle given the circumference in terms of pi.

$$\textcircled{1} \quad C = 12\pi \text{ in.}$$

$$R = \underline{6}$$

$$A = \pi r^2$$

$$\pi \cdot 6^2$$

$$A = 113.1 \text{ in}^2$$

$$\textcircled{2} \quad C = \frac{15\pi \text{ cm}}{d} \quad \begin{array}{l} 15 \div 2 \\ 7.5 \end{array}$$

$$R = \underline{7.5}$$

$$A = \pi r^2$$

$$\pi \cdot 7.5^2$$

$$A = 176.7 \text{ cm}^2$$

$$\textcircled{3} \quad C = 20\pi \text{ m}$$

$$R = \underline{10}$$

$$A = \pi r^2$$

$$A = \pi 10^2$$

$$A = \underline{314.2 \text{ cm}^2}$$

$$\textcircled{4} \quad C = 37\pi \text{ mm}$$

$$R = \underline{18.5}$$

$$A = \pi r^2$$

$$A = \pi \cdot 18.5^2$$

$$A = 1,075.2 \text{ mm}^2$$

A Ferris Wheel has a circumference of 351.68 yards. **What is the area** of the Ferris Wheel? Use 3.14 for pi.

$$C = 351.68 \text{ yds.}$$

$$C = \pi \cdot d$$

$$\frac{351.68}{3.14} = \frac{3.14d}{3.14}$$

$$d = 112$$

$$r = 56$$

$$A = \pi r^2$$

$$\pi \cdot 56^2$$

$$A = 9852 \text{ yd}^2$$