The National Orthodox School Shmaisani

***Key answer***

**Name:** ***worksheet (2) Math***

**Date:** **Grade-Section:7 (A)**

**Objectives: Find the circumference and the area of a circle.**

$$C = 2\pi r$$

$$A = \pi r^2$$

***radius*** : $r$ نصف القطر

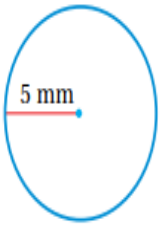
***diameter*** : $d$ القطر

***Circumference*** : $C$ المحيط

***Area*** : $A$ المساحة

$$\pi \approx 3.14 \approx \frac{22}{7}$$

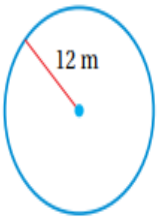
***Examples*** :




$C = 2\pi r$

$\approx 2 \times 3.14 \times 5$

$\approx 31.4$




$A = \pi r^2$

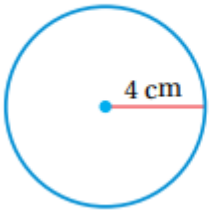
$\approx 3.14 \times (12)^2$

$\approx 452.16$

**Exercise (1): find the circumference and area of each circle.**

**(Use $\pi = 3.14$)**

**1**




$C \approx 2\pi r$

$\approx 2 * 3.14 * 4$

$\approx \boxed{25.12}$ cm

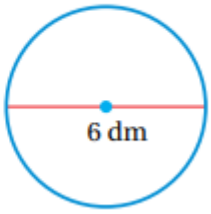
$A = \pi r^2$

$\approx 3.14 * (4)^2$

$\approx 3.14 * 16$

$\approx \boxed{50.24}$ $cm^2$

**2**




$d = 6$ dm

$\rightarrow r = \frac{6}{2} = 3$ dm

$C = 2\pi r$

$\approx 2 * 3.14 * 3$

$= \boxed{18.84}$ cm

$A = \pi r^2$

$\approx 3.14 * (3)^2$

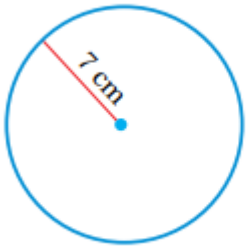
$\approx 3.14 * 9$

$\approx \boxed{28.26}$ $cm^2$

**Exercise (2): find the circumference and area of each circle.**

**(Use $\pi = \frac{22}{7}$)**

**1**




$C = 2\pi r$

$\approx \frac{2}{1} * \frac{22}{7} * \frac{7}{1}$

$\approx \boxed{44}$ cm

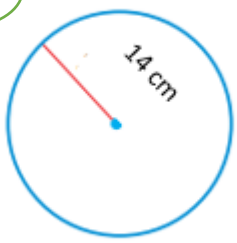
$A = \pi r^2$

$\approx \frac{22}{7} * (7)^2$

$\approx \frac{22}{7} * \frac{7}{1} * \frac{7}{1}$

$= \boxed{154}$ $cm^2$

**2**




$C \approx 2\pi r$

$\approx \frac{2}{1} * \frac{22}{7} * \frac{14}{1}$

$= \boxed{88}$ cm

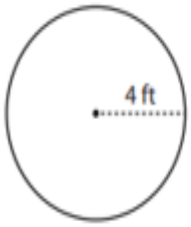
$A \approx \pi r^2$

$\approx \frac{22}{7} * (14)^2$

$\approx \frac{22}{7} * \frac{14}{1} * \frac{14}{1}$

$\approx \boxed{616}$ $cm^2$

Example :




**Area of a circle = $\pi r^2$**

Radius (r) = 4 ft

Area = $\pi r^2$

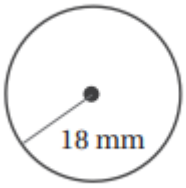
= $\pi \times 4 \times 4$

Area = **$16\pi$ ft$^2$**

***Exercise* (3): *find the circumference and area of each circle.***

***(in terms of $\pi$)***

1




$C \approx 2\pi r$

$\approx 2 \cdot \pi \cdot 18$

$\approx \boxed{36\pi}$ mm

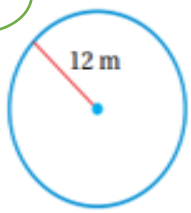
$A \approx \pi r^2$

$\approx \pi \cdot (18)^2$

$\approx \pi \cdot 18 \cdot 18$

$\approx \boxed{324\pi}$ mm$^2$

2




$C \approx 2\pi r$

$\approx 2 * \pi * 12$

$\approx \boxed{24\pi}$ m

$A \approx \pi r^2$

$\approx \pi * (12)^2$

$\approx \pi * 12 * 12$

$\approx \boxed{144\pi}$ m$^2$

*Teacher : wisam al mashni*