



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

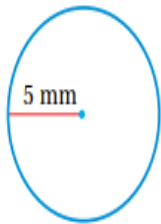
diameter : d القطر

Circumference : C المحيط

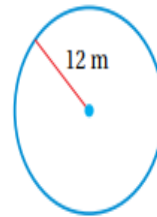
Area : A المساحة

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

Examples :



$$\begin{aligned} C &= 2\pi r \\ &\approx 2 \times 3.14 \times 5 \\ &\approx 31.4 \end{aligned}$$



$$\begin{aligned} A &= \pi r^2 \\ &\approx 3.14 \times (12)^2 \\ &\approx 452.16 \end{aligned}$$

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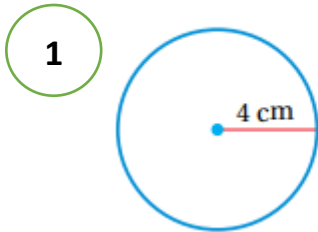
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Exercise (1): find the circumference and area of each circle.

(Use $\pi = 3.14$)



$$C \approx 2\pi r$$

$$\approx 2 \times 3.14 \times 4$$

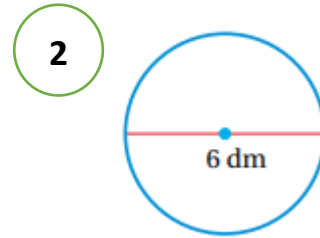
$$\approx \boxed{25.12} \text{ cm}$$

$$A = \pi r^2$$

$$\approx 3.14 \times (4)^2$$

$$\approx 3.14 \times 16$$

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



$$d = 6 \text{ dm}$$

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

$$C = 2\pi r$$

$$\approx 2 \times 3.14 \times 3$$

$$= \boxed{18.84} \text{ cm}$$

$$A = \pi r^2$$

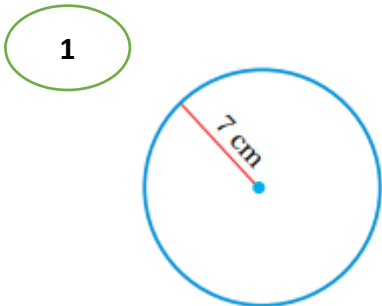
$$\approx 3.14 \times (3)^2$$

$$\approx 3.14 \times 9$$

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

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

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



$$C = 2\pi r$$

$$\approx 2 \times \frac{22}{7} \times 7$$

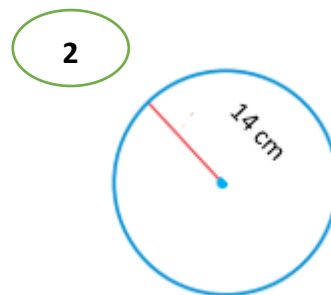
$$= \boxed{44} \text{ cm}$$

$$A = \pi r^2$$

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

$$\approx \frac{22}{7} \times 7 \times 7$$

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



$$C \approx 2\pi r$$

$$\approx 2 \times \frac{22}{7} \times 14$$

$$= \boxed{88} \text{ cm}$$

$$A \approx \pi r^2$$

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

$$\approx \frac{22}{7} \times 14 \times 14$$

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

Example:



$$\text{Area of a circle} = \pi r^2$$

$$\text{Radius } (r) = 4 \text{ ft}$$

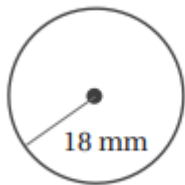
$$\text{Area} = \pi r^2$$

$$= \pi \times 4 \times 4$$

$$\text{Area} = 16\pi \text{ ft}^2$$

Exercise (3): find the circumference and area of each circle.
(in terms of π)

1



$$\begin{aligned} C &\approx 2\pi r \\ &\approx 2\pi \times 18 \\ &\approx \boxed{36\pi} \text{ mm} \end{aligned}$$

$$\begin{aligned} A &= \pi r^2 \\ &\approx \pi \times (18)^2 \\ &\approx \pi \times 18 \times 18 \\ &\approx \boxed{324\pi} \text{ mm}^2 \end{aligned}$$

2



$$\begin{aligned} C &\approx 2\pi r \\ &\approx 2 \times \pi \times 12 \\ &\approx \boxed{24\pi} \text{ m} \end{aligned}$$

$$\begin{aligned} A &\approx \pi r^2 \\ &\approx \pi \times (12)^2 \\ &\approx \pi \times 12 \times 12 \\ &\approx \boxed{144\pi} \text{ m}^2 \end{aligned}$$

Teacher : wisam al mashni