

ABEHA

10-01-25

General Ability

Q No. 6 (c)

Diameter of a circle is 6cm. Find circumference and area of circle.

Diameter of the circle = 6cm

$$\text{Radius } (r) = \frac{\text{Diameter}}{2} = \frac{6}{2} = 3\text{cm}$$

$$\text{Circumference of the circle} = C = 2\pi r$$

$$C = 2\pi(3)$$

$$C = 2(3.14)(3) \quad (\because \pi = 3.1416)$$

$$C = 18.85\text{cm}$$

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

$$A = \pi(3)^2$$

$$A = 3.14(3)^2 \quad (\because \pi = 3.14)$$

$$A = 3.14 \times 9$$

$$A = 28.26\text{cm}^2$$

Hence, Circumference = 18.85cm, Area = 28.26cm²

(d)

Identify the missing:

(i) 13, 24, 46, 90, 178, _____

(ii) 5, 6, 9, 14, 21, _____

(i) 13, 24, 46, 90, 178, _____

Each term approximately doubles the previous term:

$$24 - 13 = 11$$

$$46 - 24 = 22$$

$$90 - 46 = 44$$

$$178 - 90 = 88$$

The difference doubles each time

(11, 22, 44, 88), so the next difference will be $88 \times 2 = 176$

$$178 + 176 = 354$$

Hence, the missing number is **354**.

(ii) 5, 6, 9, 14, 21, _____

The difference between these numbers are:

$$6 - 5 = 1$$

$$9 - 6 = 3$$

$$14 - 9 = 5$$

$$21 - 14 = 7$$

The differences follow an odd number sequence (1, 3, 5, 7), so the next difference will be 9.

$$21 + 9 = 30$$

Hence, the missing number is **30**.

(i) 13, 24, 46, 90, 178, 354

(ii) 5, 6, 9, 14, 21, 30