Q.1   **Multiple Choice Questions**   **1**

1   Using Euler's formula, find V, if E = 30, F = 12.
   a. 42   b. 18   c. 21   d. 20

Q.2   **Answer the following.**   **1**

1   Find the angle subtended at the centre of a circle by an arc of length 6.05 m, if the radius of the circle is 5.5 m.
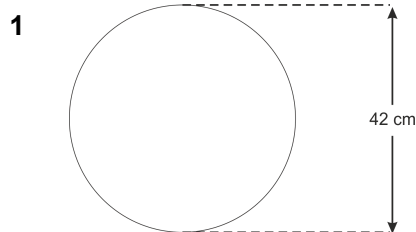
Q.3   **Answer the following**   **4**

1   The area of a sector of a circle of 6 cm radius is 15π sq.cm. Find the measure of the arc and length of the arc corresponding to the sector.

2   If the area of the minor sector is 392.5 sq. cm and the corresponding central angle is 72°, find the radius (π = 3.14).
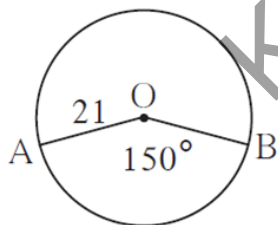
Q.4   **Solve the following**   **6**

1

42 cm

Find the surface area and the volume of a beach ball shown in the figure.

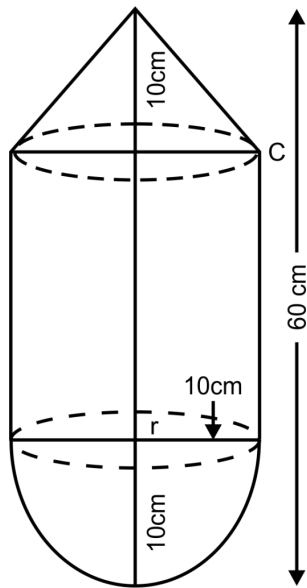**2**   The measure of a central angle of a circle is 150 ° and radius of the circle is 21 cm. Find the length of the arc and area of the sector associated with the central angle.

Q.5   **Answer the following (Non textual)**   **8**

1   A toy is a combination of a cylinder, a hemisphere and a cone, each with radius 10 cm. Height of the conical part is 10 cm and the total height is 60 cm. Find the total surface area of the toy. ($\sqrt{2}$ = 1.41)

2 Marbles of diameter 1.4 cm are dropped into a beaker containing some water and are fully submerged. The diameter of the beaker is 7cm. Find how many marbles have been dropped in it, if the water rises by 5.6 cm.

YOUR FLIGHT , OUR WINGS.