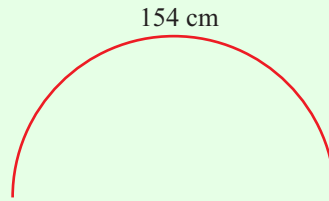


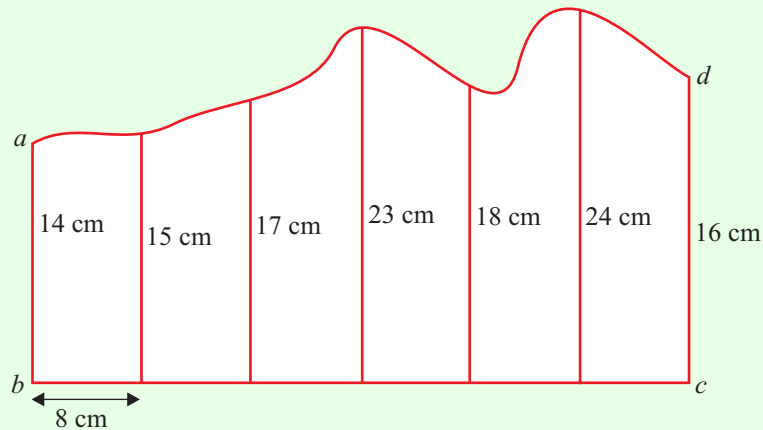
AREA & VOLUME (Q 1, PAPER 2)

1996

- 1 (a) A piece of wire of length 154 cm is in the shape of a semicircle. Find the radius length of the semicircle. Take $\pi = \frac{22}{7}$.



- (b) A sketch to estimate the area of a building site $abcd$ is shown. At intervals of 8 m along $[bc]$, perpendicular measurements of 14 m, 15 m, 17 m, 23 m, 18 m, 24 m and 16 m are made to the top boundary.



Use Simpson's Rule to estimate the area of the building site. [See Tables, page 42].

- (c) A solid cylinder, made of lead, has a radius of length 15 cm and height of 135 cm. Find its volume in terms of π .

The solid cylinder is melted down and recast to make four identical right circular solid cones. The height of each cone is equal to twice the length of its base radius.

Calculate the base radius length of the cones.

ANSWERS

- 1 (a) 49 cm
(b) 928 m^3
(c) $30,375\pi \text{ cm}^3$; 22.5 cm