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## Chapter – 11

### Mensuration

- **Perimeter:** Length of boundary of a simple closed figure.
- **Area:** The measure of region enclosed in a simple closed figure.
- Area of a trapezium = half of the sum of the lengths of parallel sides  $\times$  perpendicular distance between them.
- Area of a rhombus = half the product of its diagonals.

- **Perimeter of:**

$$\text{Rectangle} = 2(l + b)$$

$$\text{Square} = 4a$$

$$\text{Triangle} = \frac{1}{2} \times \text{base} \times \text{height}$$

$$\text{Parallelogram} = 2(\text{sum of two adjacent sides})$$

- **Diagonal of:**

$$\text{Rectangle} = \sqrt{l^2 + b^2}$$

$$\text{Square} = \sqrt{2}a$$

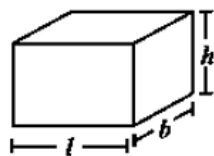
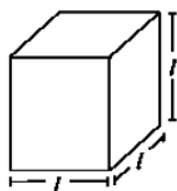
- **Surface area** of a solid is the sum of the areas of its faces.

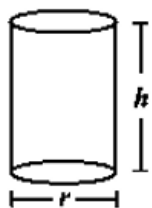
- **Surface area of:**

$$a \text{ cuboid} = 2(lb + bh + hl)$$

$$a \text{ cube} = 6l^2$$

$$a \text{ cylinder} = 2\pi r(r + h)$$





- Amount of region occupied by a solid is called its **volume**.
- Volume of

$$a \text{ cuboid} = l \times b \times h$$

$$a \text{ cube} = l^3$$

$$a \text{ cylinder} = \pi r^2 h$$

$$(i) \ 1 \text{ cm}^3 = 1 \text{ mL}$$

$$(ii) \ 1 \text{ L} = 1000 \text{ cm}^3$$

$$(iii) \ 1 \text{ m}^3 = 1000000 \text{ cm}^3 = 1000 \text{ L}$$

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