

EXERCISE 11.2

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1. The side of an equilateral triangle is shown by l . Express the perimeter of the equilateral triangle using l .

Solutions:

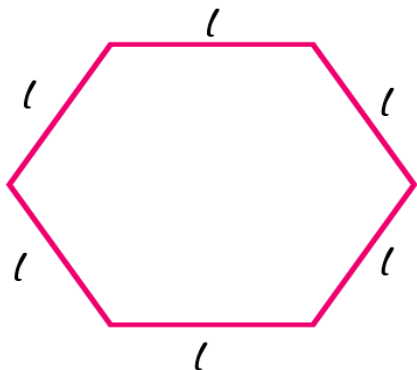
Side of equilateral triangle = l

Perimeter = $l + l + l$

= $3l$

2. The side of the regular hexagon (Fig 11.10) is denoted by l . Express the perimeter of the hexagon using l .

(Hint: A regular hexagon has all its six sides equal in length.)



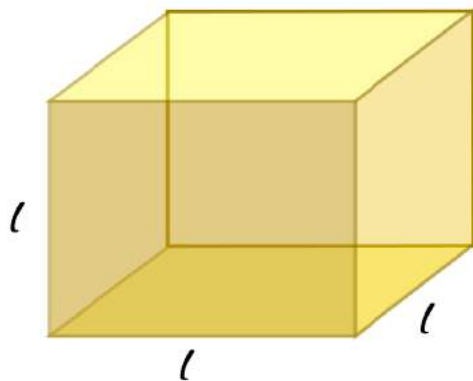
Solutions:

Side of a regular hexagon = l

Perimeter = $l + l + l + l + l + l$

= $6l$

3. A cube is three dimensional figure as shown in Fig 11.11. It has six faces and all of them are identical squares. The length of an edge of the cube is given by l . Find the formula for the total length of the edges of a cube.



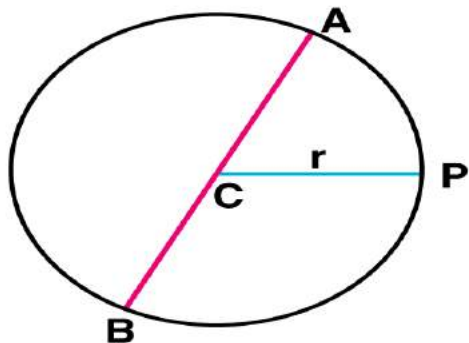
Solutions:

Length of an edge of the cube = l

Number of edges = 12

Total length of the edges = Number of edges \times length of an edge
= 12l

4. The diameter of a circle is a line which joins two points on the circle and also passes through the centre of the circle. (In the adjoining figure (Fig 11.2) AB is a diameter of a circle; C is its centre.) Express the diameter of the circle (d) in terms of its radius (r).



Solutions:

$$\begin{aligned}\text{Diameter} &= AB \\ &= AC + CB \\ &= r + r \\ &= 2r\end{aligned}$$

Hence, the diameter of the circle in terms of its radius is $2r$

5. To find sum of three numbers 14, 27 and 13 we can have two ways:

(a) We may first add 14 and 27 to get 41 and then add 13 to it to get the total sum 54 or

(b) We may add 27 and 13 to get 40 and then add 14 to get the sum 54. Thus, $(14 + 27) + 13 = 14 + (27 + 13)$

Solutions:

For any three whole numbers a, b and c

$$(a + b) + c = a + (b + c)$$