FAQs

1. An architect want to play tiles in a 6m x 5m room. Each tile size is 50cm x 50cm. How many numbers of tile are required?

   Solution:

   Total area of the room is 6m x 5m which is equal to 30m^2.

   Area of each tile is 50cm x 50cm,

   $$= 50 \times 50 cm^2$$

   $$= 2500 \times 10^{-4} m^2$$

   $$= 0.25 m^2$$

   Total number of tiles required is,

   $$= \frac{Total.area.of.the.room}{area.of.each.tile}$$

   $$= \frac{30 m^2}{0.25 m^2} = 120 numbers.$$

   Therefore 120 tiles are required.

2. A sphere like structure is constructed in a park. Radius of the sphere is 5m. A painter asks Rs.200 per square meters for painting. Calculate the total price of painting this structure.

   Solution:

   Total surface area of the sphere like structure is equal to,

   $$= 4\pi r^2$$

   $$= 4 \times 3.14 \times (5m)^2$$

   $$= 314 m^2$$

Painter charges Rs.200 per square meter. So the total charge is 314m^2 x 200 which is Rs. 62800.

3. A painter wants to draw a right angle triangle in a rectangle wall of dimension 4m length and 5m height. Base and height of the triangle is equal to half the length of the wall and half the height of the wall. Calculate the hypotenuse of the triangle.

Solution:

Base of the triangle is 4/2 is equal to 2m.

Height of the triangle is 5/2 is equal to 2.5m

Hypotenuse is equal to,

$$= \sqrt{2^2 + (2.5)^2}$$

$$= \sqrt{4 + 6.25} = 3.2m$$

4. Find the volume of a cuboid of length 20m, breadth 15m and height 10m.

Solution:

Length of a cuboid = 20cm

Breadth of the cuboid = 15cm

Height of the cuboid = 10cm

Volume of the cuboid = 20 x 15 x 10

= 3000 m^3.

5. The height of a cylinder is the same of the circumference of its base. Its measured height is 125.66cm. Calculate the volume of the cylinder.

<u>Solution:</u>

Height is equal to circumference, so

$$= 2\pi r = 125.66cm$$

$$r = \frac{125.66}{2 \times 3.14} cm = 20cm$$

Volume is equal to,

$$= \pi r^2 h$$

$$= 3.14 \times (20)^2 \times 125.66$$

$$= 157{,}909.01cm^3$$