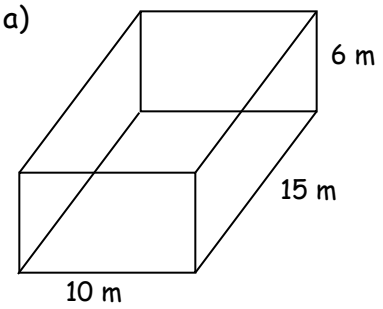
Volume of Prisms

- Volume refers to the amount of space occupied by a 3-dimensional object.

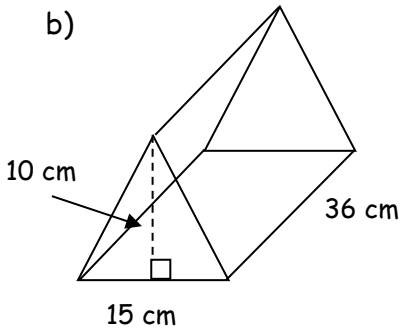
- To find the volume of a prism:
  1) Determine the area of the base
  2) Multiply the area by the height (distance between the base and top)

Ex/ For the shapes below, identify and calculate the area of the base, then find the volume.

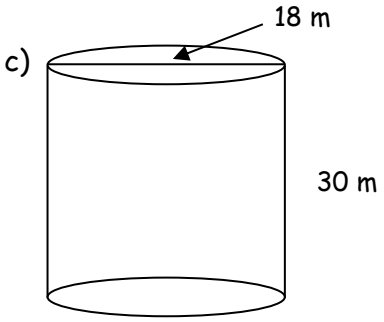
a)



b)



c)



Ex/ How much sand is needed to fill a cylinder container that has a radius of 10 cm and is 25 cm high?

Ex/ A 1-m wide concrete path that is 10 cm deep is placed around a circular lawn of diameter 20 m. Find the volume of concrete in the path.

Ex/ A box is to hold 24 cans. Each can has a diameter of 6.5 cm and a height of 10 cm. The cans will be packaged in 1 layer and arranged in 4 rows with 6 cans in each row. Each can will touch the can beside it, the cans at the edge will touch the box, and the bottoms and tops of the cans will touch the box.

a) Determine the dimensions of the box needed to hold the cans.

b) How much empty space will there be in the box?