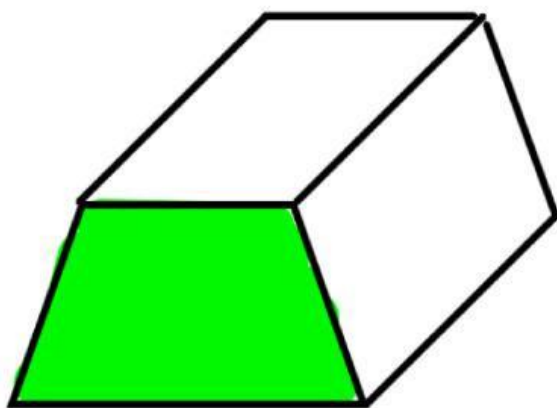# VOLUME OF 3-D SHAPES

[Prisms , Cylinders , Pyramids , Cones]
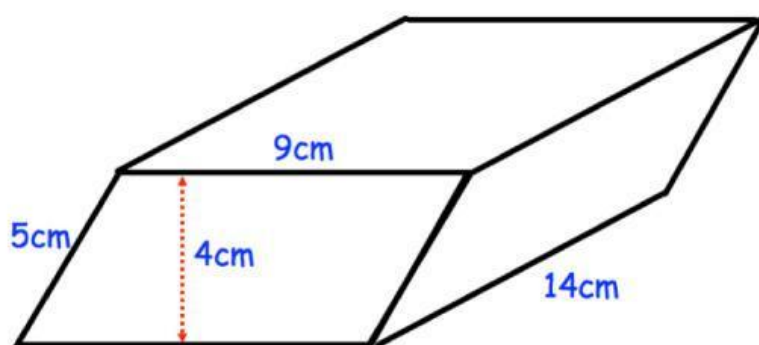
The diagram shows a trapezoid prism. The area of the cross-section is 55cm². The volume of the prism is 330cm³.
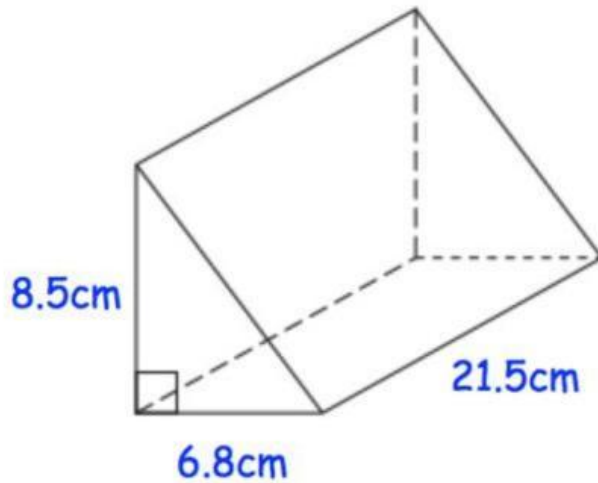
Find the length of the prism.

_____ cm

The diagram shows a prism. The cross-section is a parallelogram. Find the volume of the prism.

9cm

5cm

4cm

14cm

_____ cubic cm

Shown below is a triangular prism. Find the volume of the triangular prism.

8.5cm

21.5cm

6.8cm

_____ cubic cm

Shown below is a cone and a cube
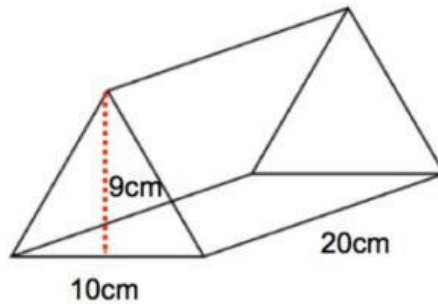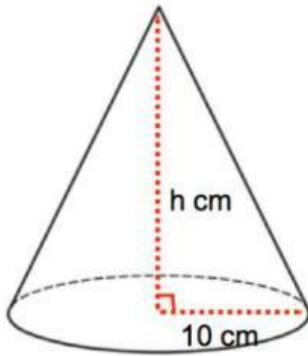
The volume of the cube is twice the volume of the cone. Find the side length of the cube, x. Give your answer to 1 decimal place.
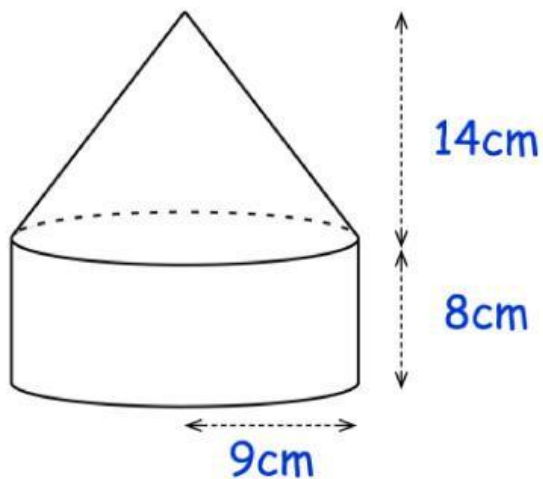

6cm

5cm

x

_____ cm

LIVEWORKSHEETS
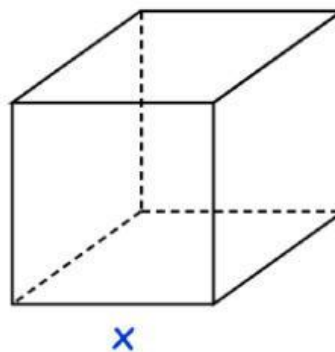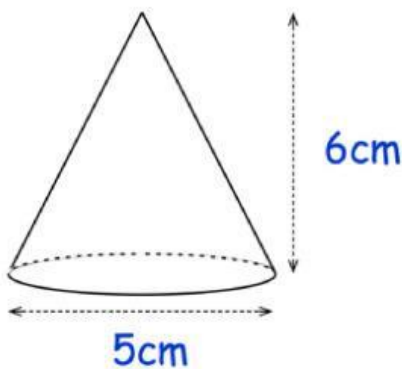
Shown is a cone and a triangular prism.

Both solids have the same volume. Calculate the height of the cone.

h cm

10 cm

9cm

10cm

20cm

_____ cm

Shown a shape is made by joining a cone and a cylinder. Work out the volume of the shape
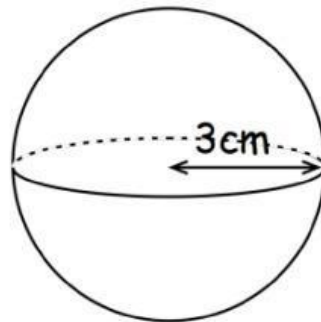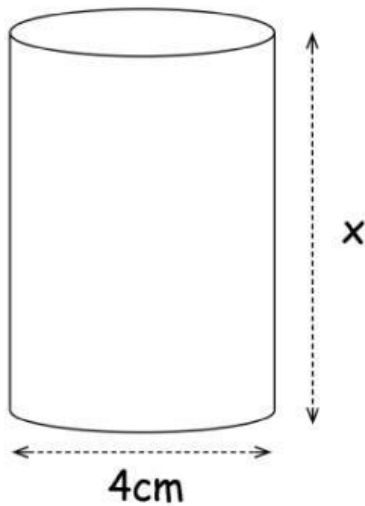
14cm

8cm

9cm

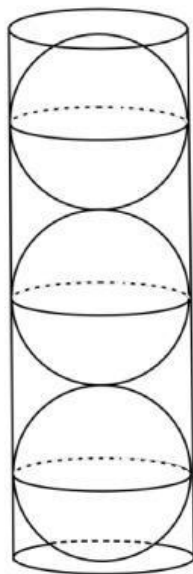_____ cubic cm

Shown below is a cylinder and a sphere.

Volume of the cylinder : volume of the sphere = 5 : 3

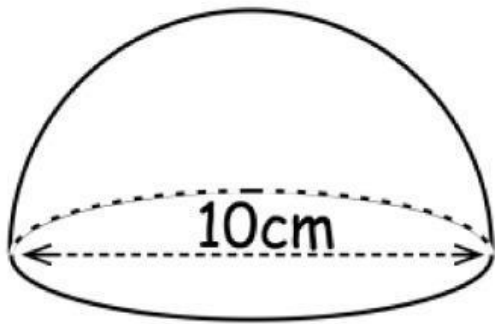Work out the height of the cylinder, x.

x

3cm

4cm

_____ cm

Three spheres of radius 4cm just fit inside a tube. Calculate the percentage of the tube that is not filled.
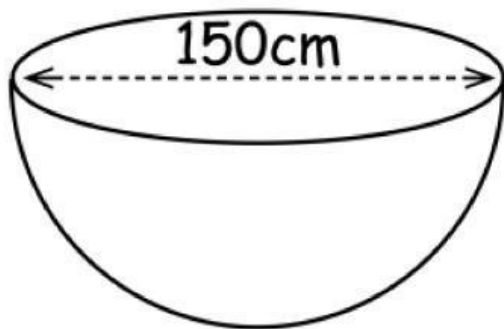

_____ %

Shown below is a solid glass paperweight.

The paperweight is a hemisphere with diameter 10cm. The density of the glass is 2.5g/cm³ Calculate the mass of the paperweight.

10cm

_____ g

Evelyn has built a new garden pond. The pond is a hemisphere, diameter 150cm.
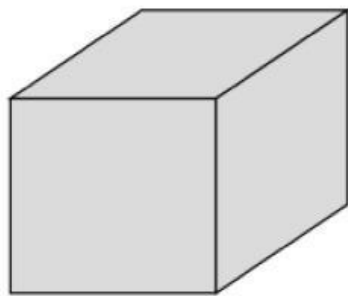
She fills the pond at a rate of 0.25 litres per second. Work out how long it takes Evelyn to fill the pond.
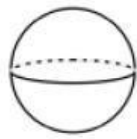

150cm

_____ sec

The solid metal cube, with side length 12cm

Kieran melts the metal cube and uses it to make as solid metal spheres, radius 2cm. Work out how many spheres Kieran can make.
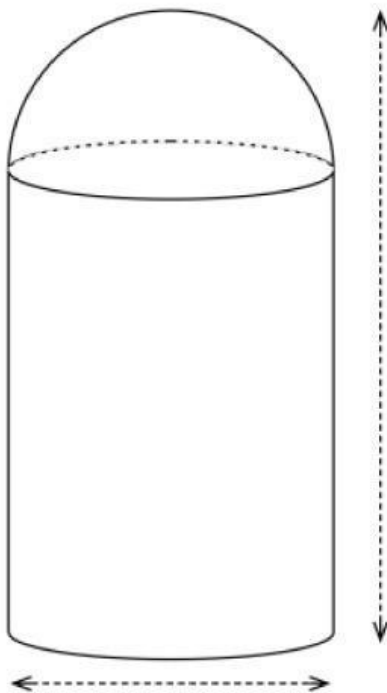
12cm

2cm

_____

The container is created from a cylinder and a hemisphere.

The height of the container is 20cm. The diameter of the cylinder is 4cm. Calculate the volume of the container.

20cm

4cm

_____ cubic cm