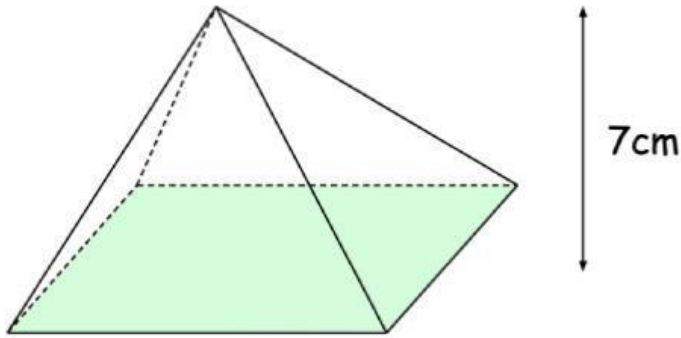


## VOLUME : 3D SHAPES

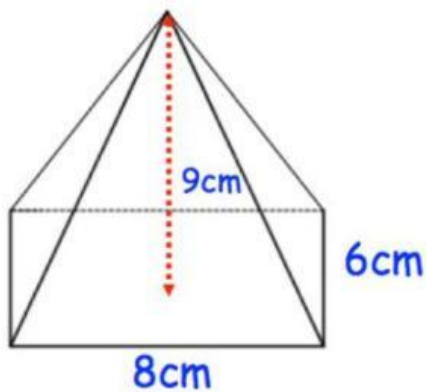
A pyramid is shown below

The perpendicular height of the pyramid is 7cm The area of the base of the pyramid is  $60\text{cm}^2$  Find the volume of the pyramid.



A rectangular-based pyramid is shown below.

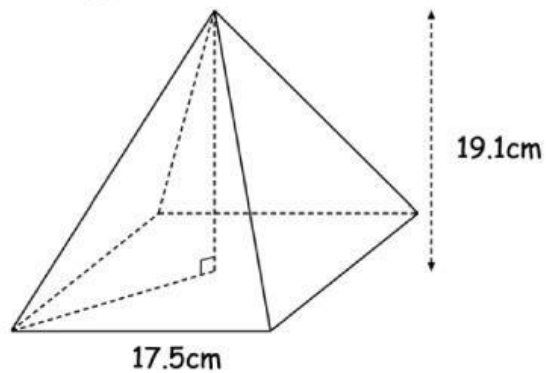
Calculate the volume of the pyramid



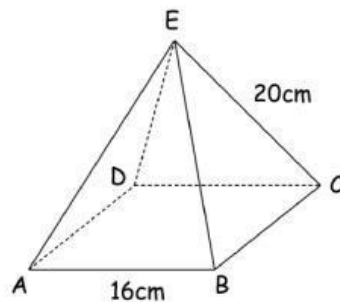
A square-based pyramid has a base with side length 15cm. The perpendicular height of the pyramid is 10cm. Calculate the volume of the pyramid.

---

A square based pyramid. Find volume of pyramids



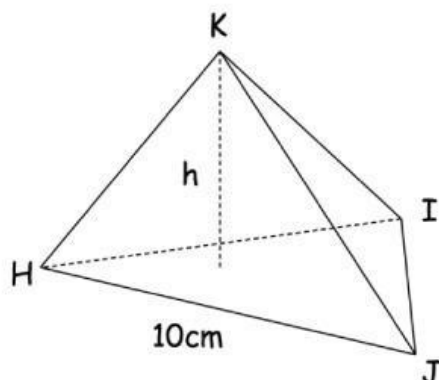
ABCDE is a square based pyramid.



The point E is directly over the centre of the base ABCD. Work out the volume of the pyramid.

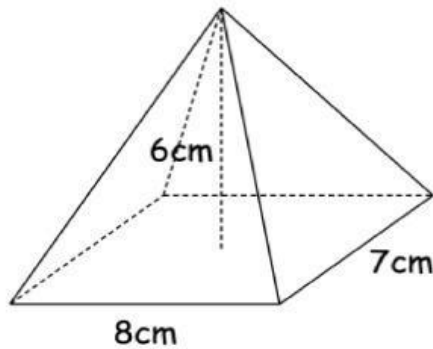
HIJK is a triangle based pyramid. The base HIJ is an equilateral triangle with side 10cm

The volume of the pyramid is  $300\text{cm}^3$ . Calculate the perpendicular height,  $h$ , of the pyramid.



A solid wooden paperweight is shown below. The paperweight is a rectangular based pyramid.

The density of the wood is  $0.65\text{g/cm}^3$  Find the mass of the paperweight

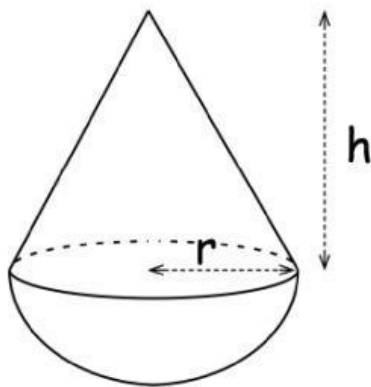


\_\_\_\_\_

The diagram shows a solid made up of a cone and a hemisphere.

The radius of the cone is 5cm. The height of the cone is 8cm

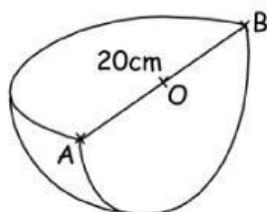
Calculate the volume of the solid.



\_\_\_\_\_

Shown below is a quarter of a sphere. O is the centre of the sphere.

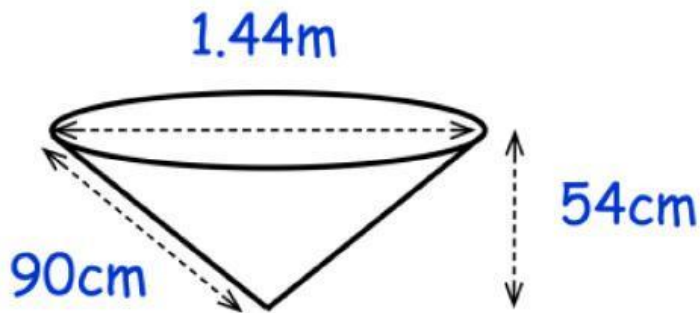
Work out the volume of the shape. Give your answer to 2 significant figures.



\_\_\_\_\_

Jasmine has a pond in her garden. The pond is a cone and is shown below.

Jasmine fills the pond from empty, at a rate of 15 litres per minute. Work out how long it should take Jasmine to fill the pond. Give your answer to the nearest minute.



A large cone is cut into two parts, a smaller cone and a frustum of a cone. The height of the large cone is 20cm.

The height of the smaller cone is 10cm.

The radius of the base of the large cone is 8cm. The radius of the base of the smaller cone is 4cm.

Work out the volume of the frustum.

