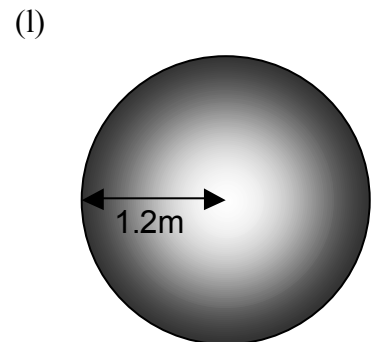
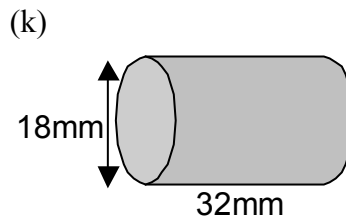
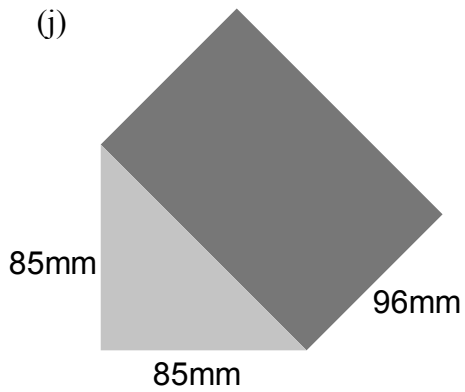
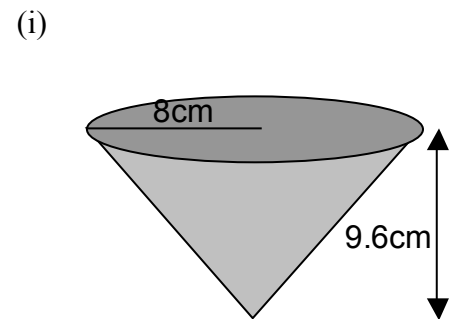
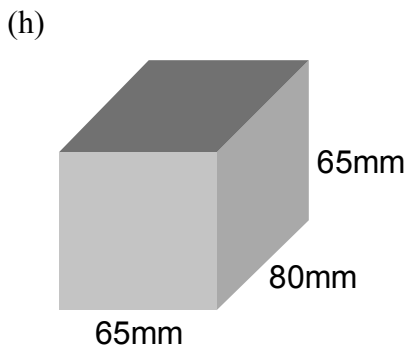
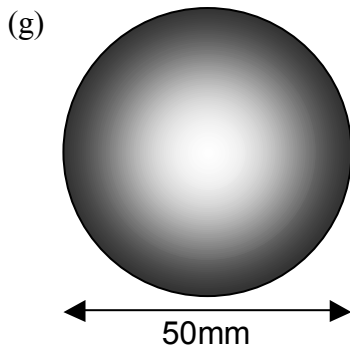
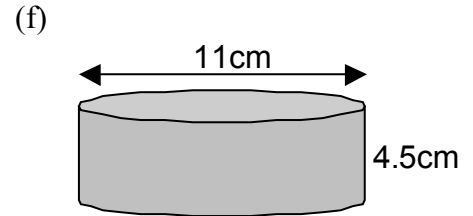
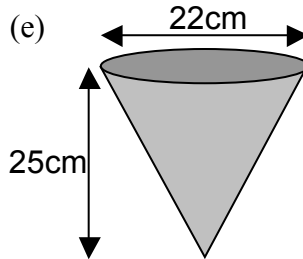
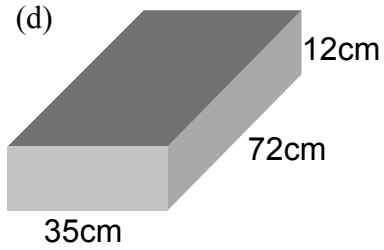
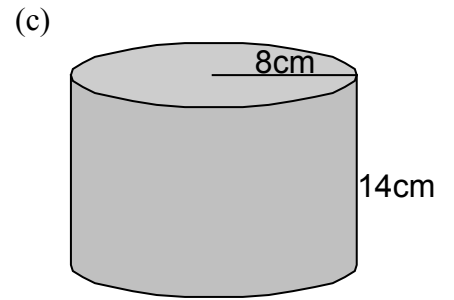
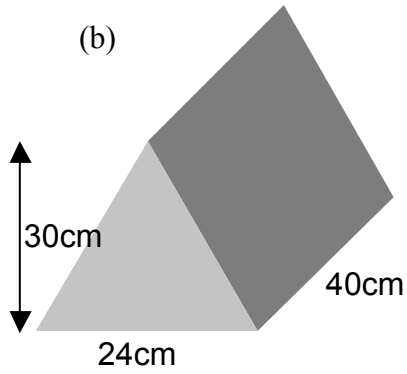
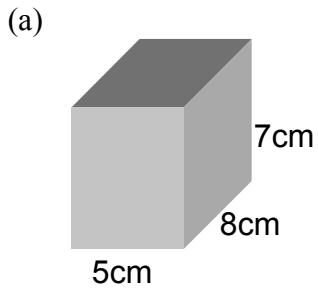


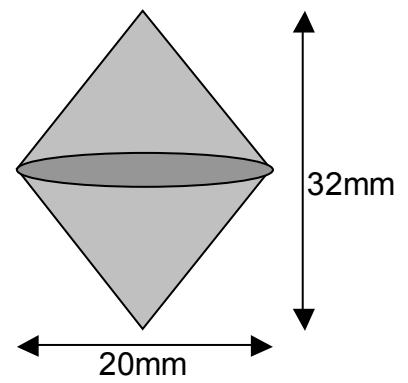
# Volume

1. Find the volume of each solid below.



2. The diagram opposite shows an anglers metal float.  
The float is made from two identical sized cones.

Find the volume of metal in the float.



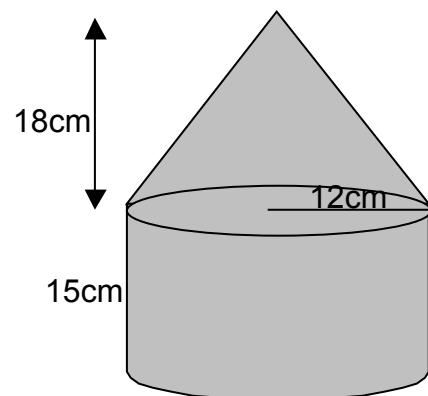
3. The picture opposite shows a football.

The diameter of the ball is 32 cm.  
Calculate the volume of the ball.



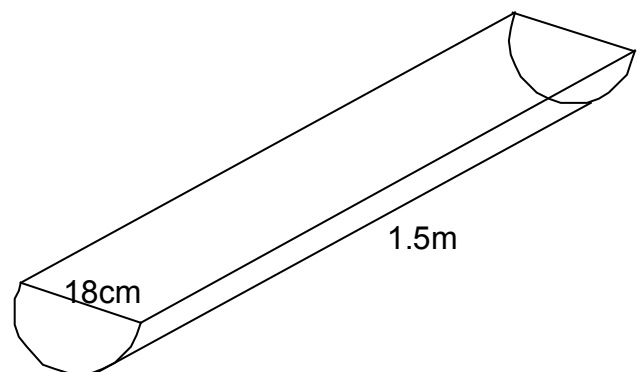
4. The solid opposite consists of a cylinder with a cone placed on top.

Calculate the volume of this solid.



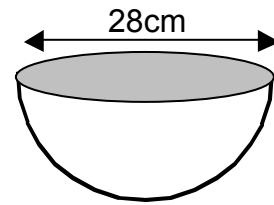
5. The diagram shows a length of guttering in the shape of a half cylinder.

Calculate the volume of the guttering.



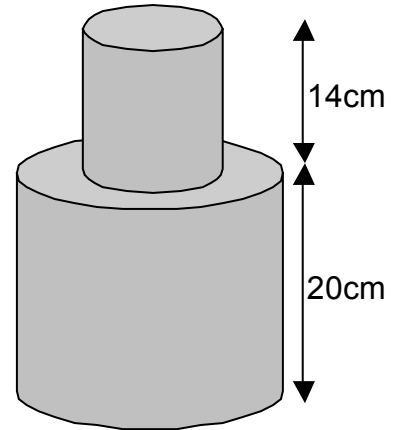
6. The diagram shows a fruit bowl in the shape of a hemisphere.

Calculate the volume of the fruit bowl.



7. A connecting pipe used by a plumber consists of two plastic cylinders.  
The smaller cylinder has radius 5 centimetres and the larger cylinder has radius 9 centimetres.

Calculate the total volume of the pipe.



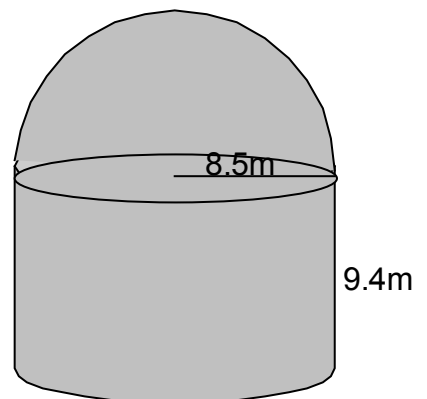
8. The globe in the picture opposite has a radius of 36 centimetres.

Calculate its volume.



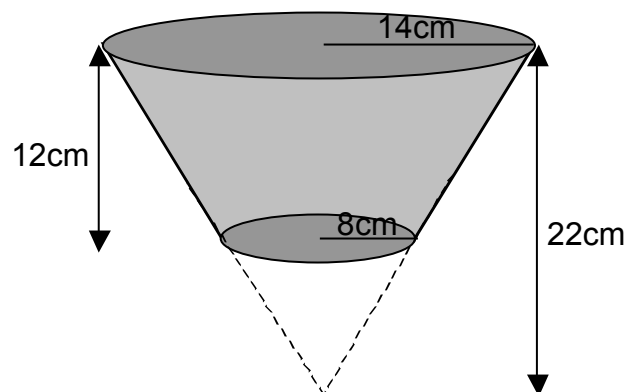
9. A storage barn is in the shape of a cylinder with a hemisphere on top.

Calculate the volume of the storage barn.



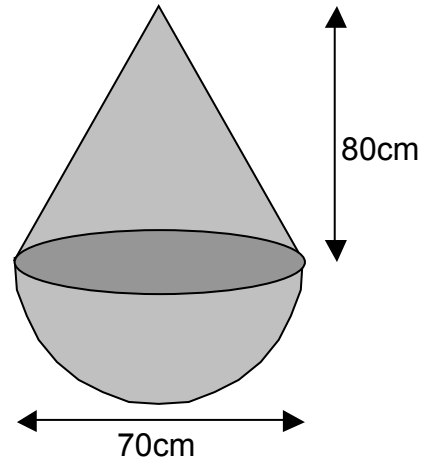
10. A waste paper bin is in the shape of a large cone with a smaller cone removed.  
The large cone has radius 14 centimetres and height 22 centimetres. The small cone has radius 8 centimetres.

Calculate the volume of the bin.



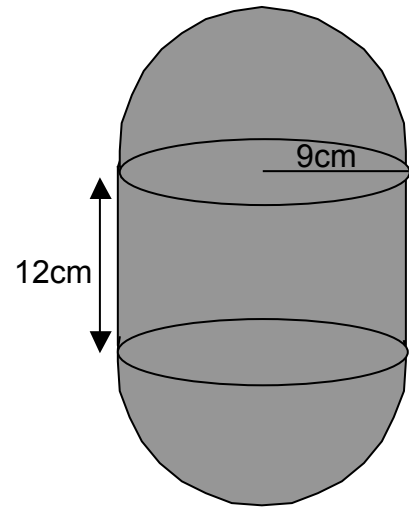
11. A buoy is in the shape of a hemisphere with a cone on top, as shown opposite.

Calculate the volume of this buoy.



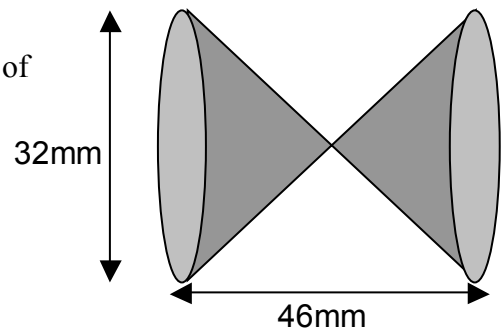
12. The shape opposite consists of a cylinder with hemispherical ends. The radius of the cylinder is 9 centimetres and its height is 12 centimetres.

Calculate the volume of this shape.



13. The diagram opposite shows a child's toy in the shape of two cones.

Calculate the volume of this shape.



14. The diagram shows a cylinder with a cone cut from it.

The cone and the cylinder both have radius 24 centimetres and height 40 centimetres.

Calculate the volume of the solid once the cone has been removed.

