

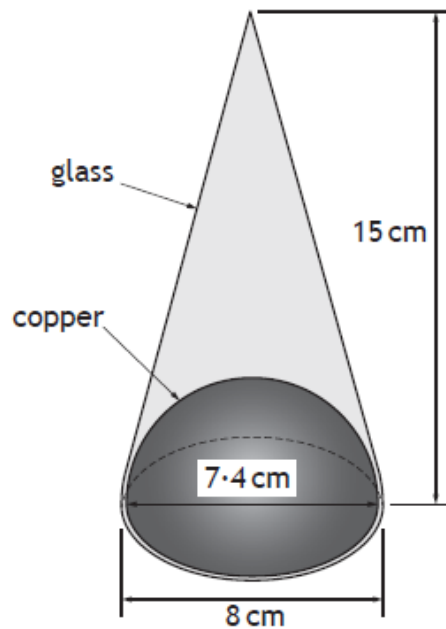
National 5 Mathematics  
Exam Questions by Topic

**Volume**

**2014 N5 Past Paper P2, Q7**

1. An ornament is in the shape of a cone with diameter 8 centimetres and height 15 centimetres.

The bottom contains a hemisphere made of copper with a diameter 7.4 centimetres. The rest is made of glass, as shown in the diagram below.



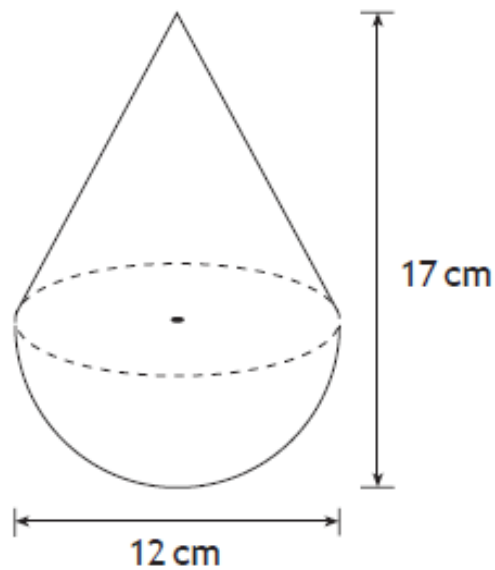
Calculate the volume of the glass part of the ornament.

Give your answer correct to 2 significant figures.

(5 marks)

**2013 N5 Specimen P2, Q6**

2. A child's toy is in the shape of a hemisphere with a cone on top as shown in the diagram.



The toy is 12 centimetres wide and 17 centimetres high.

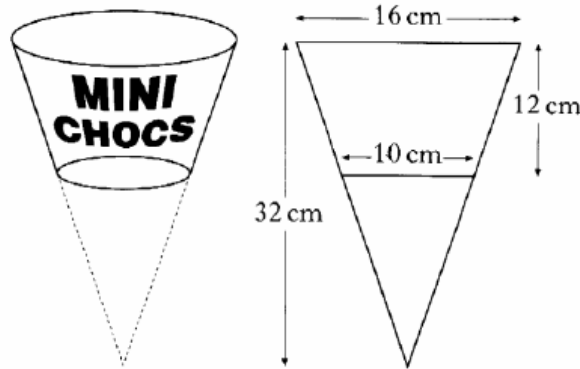
Calculate the volume of the toy.

Give your answer correct to 2 significant figures.

(4 marks)

**N5 Practice Paper B, P2, Q5**

3. A container to hold chocolates is in the shape of part of a cone with dimensions as shown below.



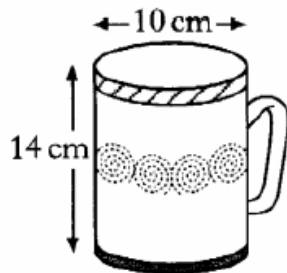
Calculate the volume of the container.

Give your answer correct to one significant figure.

(5 marks)

**N5 Practice Paper C, P2, Q4**

4. A mug is in the shape of a cylinder with a diameter 10 centimetres and height 14 centimetres.



(a) Calculate the capacity of the mug.

(2 marks)

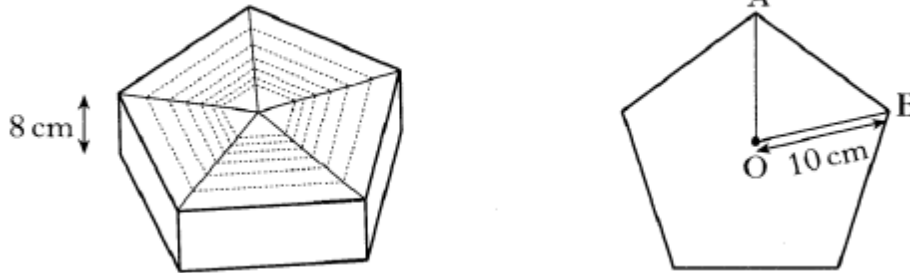
(b) 600 millilitres of coffee are poured in.

Calculate the depth of the coffee in the mug.

(3 marks)

**N5 Practice Paper D, P2, Q9**

5. A gift box, 8 centimetres high, is prism shaped.



The uniform cross-section is a regular pentagon.

Each vertex of the pentagon is 10 centimetres from the centre O.

Calculate the volume of the box.

(5 marks)