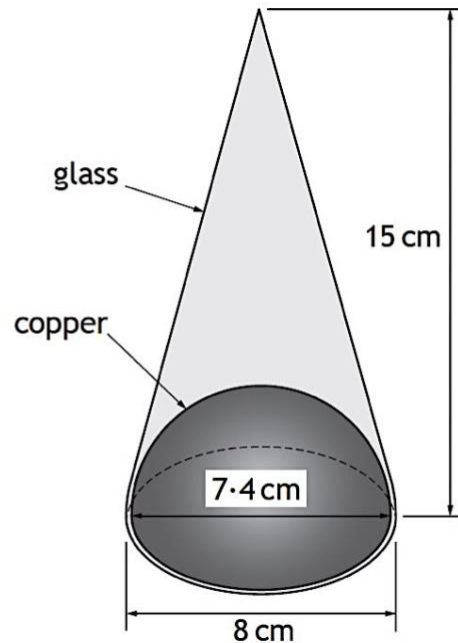




Volume – Questions

- Q1) An ornament is in the shape of a cone with diameter 8 cm and height 15 cm .
The bottom contains a hemisphere made of copper with diameter 7.4 cm .
The rest is made of glass, as shown in the diagram below.

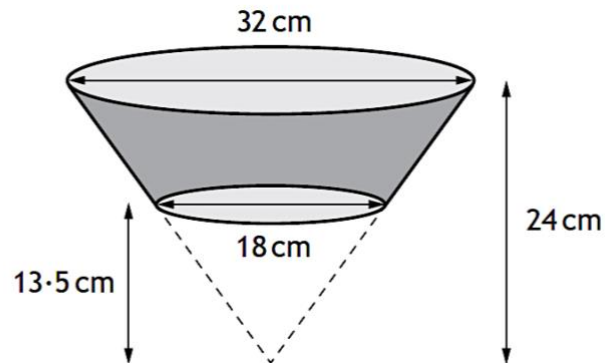


Calculate the volume of the glass part of the ornament.

- Q2) a) The Earth is approximately spherical with a radius of 6400 kilometres.
Calculate the volume of the Earth giving your answer in scientific notation,
correct to 2 significant figures.
- b) The approximate volume of the moon is 2.2×10^{10} cubic kilometres.
Calculate how many times the Earth's volume is greater than the Moon's.

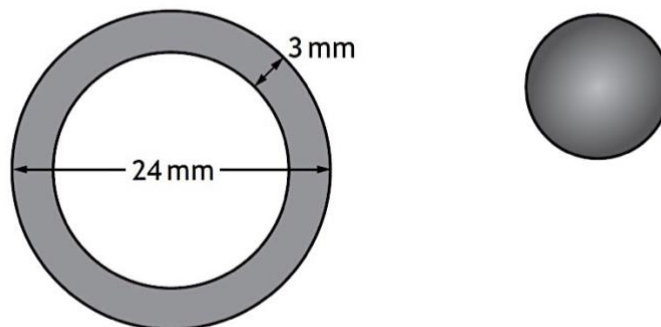


- Q3) A carton is in the shape of a large cone with a small cone removed.
The large cone has diameter of 32 cm and height 24 cm .
The small cone has diameter of 18 cm and height 13.5 cm .



Calculate the volume of the carton correct to 2 significant figures.

- Q4) A spherical sweet is made by coating a caramel sphere evenly with chocolate.
A cross-section of the sweet is shown below.



The diameter of the sweet is 24 millimetres and the thickness of the chocolate coating is 3 millimetres.

Calculate the volume of the chocolate coating correct to 3 significant figures.



Volume - Solutions

Q1) 145.2 cm^3

Q2) a) $1.1 \times 10^{12} \text{ km}^3$

b) 50 times

Q3) $5,300 \text{ cm}^3$

Q4) $4,190 \text{ mm}^3$