

National 5 Homework

Mixed questions 2A

Q1. Expand the brackets and simplify:

a) $(x+2)(x-6)$

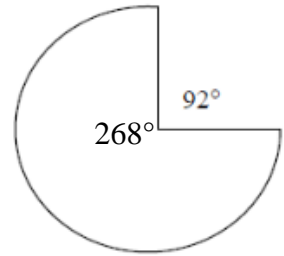
b) $(2a-3)(3a-2)$

c) $(y-4)^2$

d) $(2x+1)^2 + (x-1)(x-3)$

Q2. Calculate **a)** the length of the arc and
b) the area of this sector
of a circle with radius 13mm.

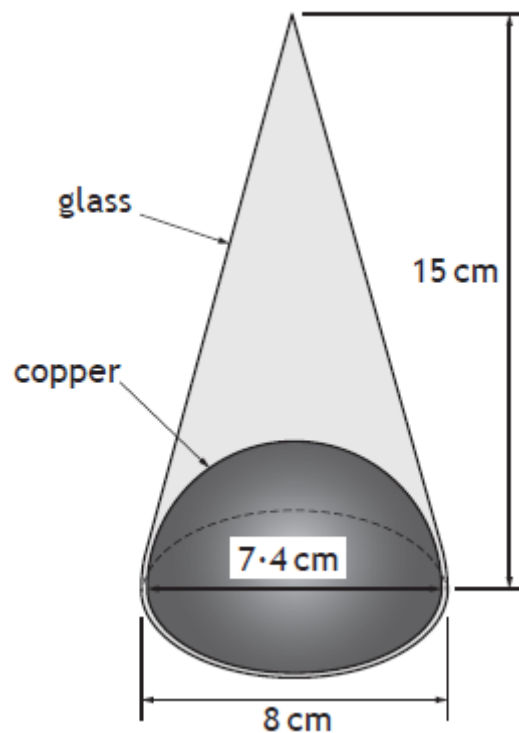
Give your answers correct to 3 significant figures.



Q3. 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 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.