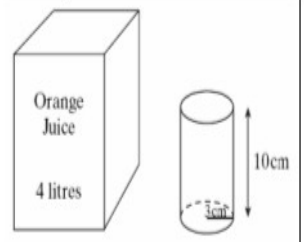
Question 1. (AQA June 2003 Intermediate Paper 2 Calculator OK)

A large carton contains 4 litres of orange juice.

Cylindrical glasses of height 10 cm and radius 3 cm are to be filled from the carton.

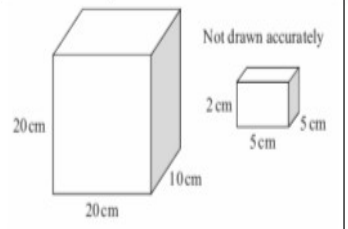
How many glasses can be filled?
You **must** show all your working.



[5 marks]

Question 2. (AQA June 2006 Intermediate Paper 2 Calculator OK)

The diagram shows two boxes that are cuboids.
The larger box measures 20cm by 10cm by 20cm.
It is partly filled with 70 smaller boxes each measuring 5cm by 5cm by 2cm.
The smaller boxes are packed so that there are no gaps between them.



How many more smaller boxes could be fitted into the larger box?

[4 marks]

Question 3. (AQA November 2004 Intermediate Paper 2 Calculator OK)

A cylinder has a radius of 5 cm.

(a) Calculate the circumference of a circular end of the cylinder.

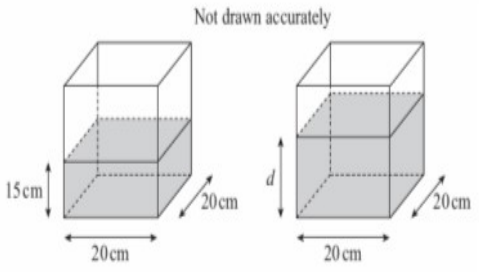
[2 marks]

(b) The cylinder has a volume of 250 cm^3.
Calculate the height of the cylinder.

[3 marks]

Question 4. (AQA November 2006 Intermediate Paper 2 Calculator OK)

A water container is in the shape of a cuboid.
Its base is 20cm by 20cm and the depth of the water in the container is 15cm.
Tony adds 1000 cm^3 of water to the container.

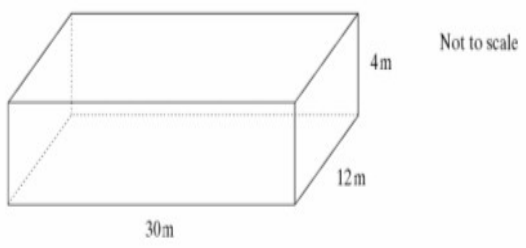


Calculate the new depth, d, of the water, in centimetres.

[4 marks]

Question 5. (AQA June 2003 Intermediate Paper 1 NO Calculator)

A school hall is in the shape of a cuboid.
The school hall is 30 m long, 12 m wide and 4 m tall, as shown in the diagram.



(a) Calculate the volume of the hall.

[2 marks]

(b) Calculate the total area of the **four walls** of the hall.

[3 marks]