G084 Surface area of prisms

Q1.

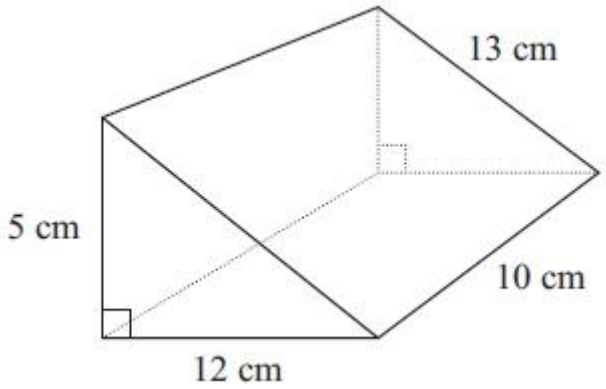


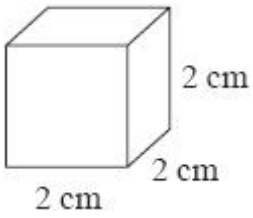
Diagram **NOT** accurately drawn

Work out the total surface area of this triangular prism.

(Total for Question is 4 marks)

Q2.

The diagram shows a cube of side length 2 cm.



Vera says,

"The volume of any solid made with 6 of these cubes is 48 cm^3"

(a) Is Vera correct?

You must show your working.

.....

.....

(2)

(b) (i) Draw a cuboid that can be made with 6 of these cubes.

Write the dimensions of the cuboid on your diagram.

(1)

(ii) Work out the surface area of your cuboid.

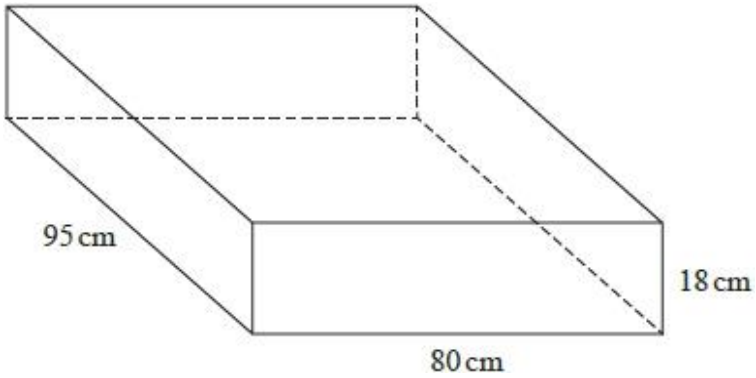
..... cm^2

(2)

(Total for question = 5 marks)

Q3.

A sofa has 6 identical cushions.
Each cushion is a cuboid 18 cm by 80 cm by 95 cm.



The cushions are covered with a protective spray.
The protective spray is in cans.

The label on each can has this information.

Spray in this can covers 4 m^2

(a) Work out how many cans are needed to cover the 6 cushions with protective spray.

.....

(5)

The information on each label is inaccurate.
The spray in each can covers 10% more than 4 m^2.

(b) How will this affect the number of cans needed for the 6 cushions?

You must show how you get your answer.

.....

.....

(2)

(Total for question = 7 marks)

Q4.

The total surface area of a cube is 294 cm^2.

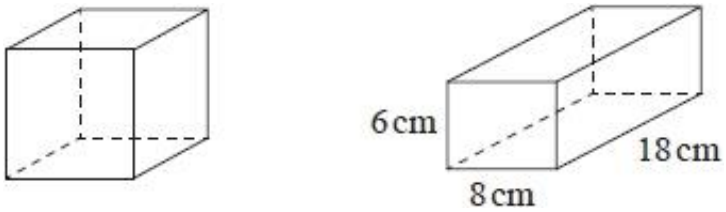
Work out the volume of the cube.

..... cm^3

(Total for question = 4 marks)

Q5.

The diagram shows a cube and a cuboid.



The total surface area of the cube is equal to the total surface area of the cuboid.

Janet says,

"The volume of the cube is equal to the volume of the cuboid."

Is Janet correct?
You must show how you get your answer.

(Total for question = 5 marks)

Q6.

Here is a solid cuboid.

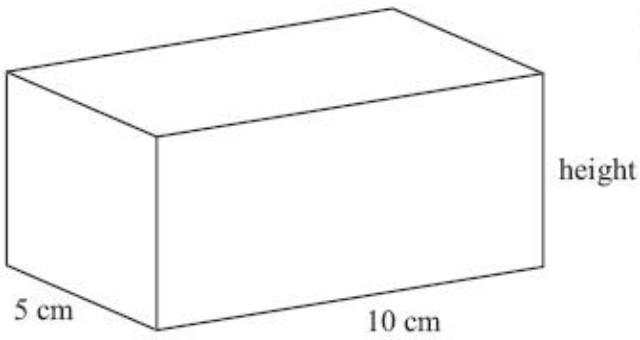


Diagram **NOT** accurately drawn

The cuboid has a width of 5 cm and a length of 10 cm.
The cuboid has a total surface area of 280 cm^2.

Work out the height of the cuboid.

. . . . . cm

(Total for Question is 4 marks)

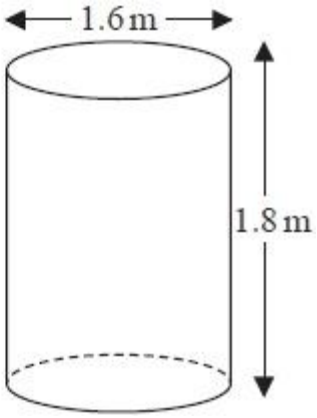
Q7.

Jeremy has to cover 3 tanks completely with paint.

Each tank is in the shape of a cylinder with a top and a bottom.
The tank has a diameter of 1.6 m and a height of 1.8 m.

Jeremy has 7 tins of paint.
Each tin of paint covers 5 m^2

Has Jeremy got enough paint to cover completely the 3 tanks?
You must show how you get your answer.



(Total for question = 5 marks)