1   The total surface area of a cube is $294 \, \text{cm}^2$.
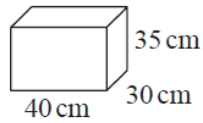
Work out the volume of the cube.

.... cm^3

(Total for Question   is 4 marks)

2 Chloe has a van.

She is going to use the van to deliver boxes.
Each box is a cuboid, 40 cm by 30 cm by 35 cm.

The space for boxes in the van has

maximum length   2.4 m
maximum width   1.5 m
maximum height   1.4 m

The space for boxes is empty.
Chloe wants to put as many boxes as possible into the van.

She can put 3 boxes into the van in one minute.
Assume that the space for boxes is in the shape of a cuboid.

(a) Work out how many minutes it should take Chloe to put as many boxes as possible
into the van.

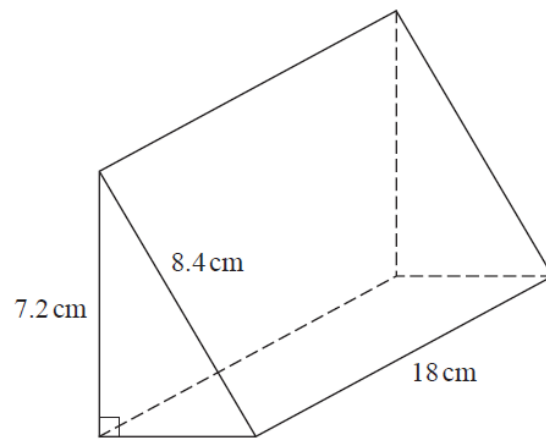... minutes

(4)

The space for boxes might **not** be in the shape of a cuboid.

(b) Explain how this could affect the time it would take Chloe to put as many boxes as
possible into the van.

....

....

(1)

(Total for Question   is 5 marks)

3   Here is a triangular prism.

Work out the volume of the prism.
Give your answer correct to 3 significant figures.

.... cm³

(Total for Question   is 5 marks)

4   The diagram shows a cube and a cuboid.

6 cm
18 cm
8 cm
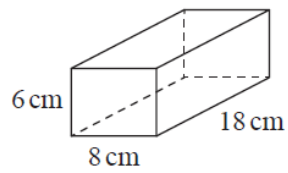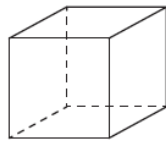
The total surface area of the cube is equal to the total surface area of the cuboid.
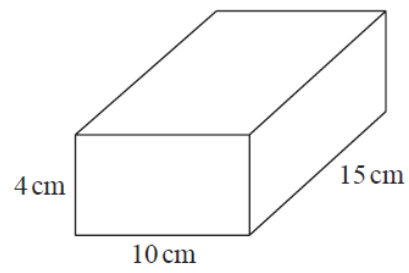
Janet says,

"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   is 5 marks)

5 Here is a cuboid.

4 cm   10 cm   15 cm

Work out the volume of the cuboid.

....

(Total for Question   is 3 marks)