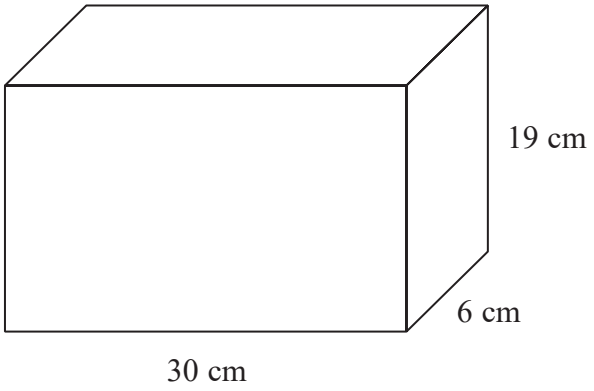
Summer 2019 Paper 2 Q4

1 A container is in the shape of a cuboid.



The container is $\frac{2}{3}$ full of water.

A cup holds 275 m*l* of water.

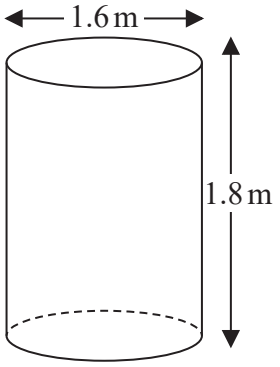
What is the greatest number of cups that can be completely filled with water from the container?

.....

(Total for Question 1 is 4 marks)

Summer 2019 Paper 3 Q6

2 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.

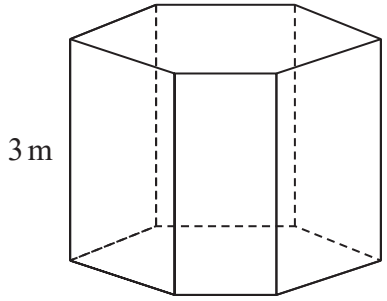
Jeremy has 7 tins of paint.
Each tin of paint covers 5 m^2

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

(Total for Question 2 is 5 marks)

Summer 2020 Paper 1 Q8

3 The diagram shows a prism placed on a horizontal floor.



$$\text{pressure} = \frac{\text{force}}{\text{area}}$$

The prism has height 3 m
The volume of the prism is 18 m^3

The pressure on the floor due to the prism is 75 newtons/m^2

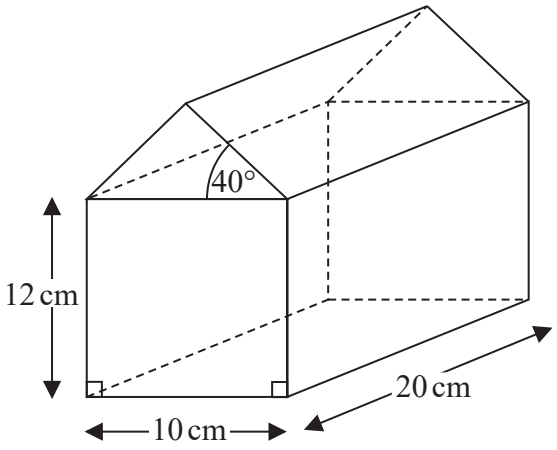
Work out the force exerted by the prism on the floor.

..... newtons

(Total for Question 3 is 3 marks)

Summer 2020 Paper 3 Q9

4 The diagram shows a prism.



The cross section of the prism has exactly one line of symmetry.

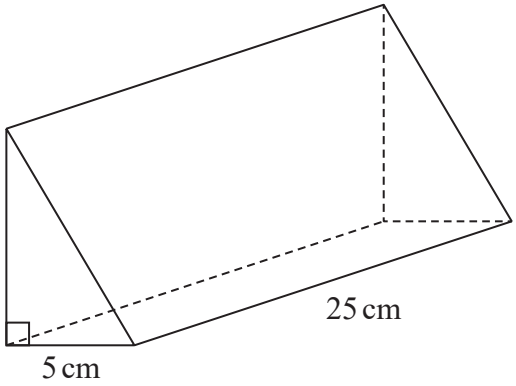
Work out the volume of the prism.
Give your answer correct to 3 significant figures.

..... cm^3

(Total for Question 4 is 5 marks)

Summer 2021 Paper 1 Q6

5 The diagram shows a prism.



The cross section of the prism is a right-angled triangle.
The base of the triangle has length 5 cm

The prism has length 25 cm
The prism has volume 750 cm^3

Work out the height of the prism.

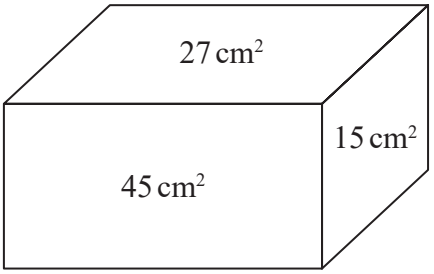
..... cm

(Total for Question 5 is 3 marks)

Autumn 2018 Paper 3 Q8

6 The diagram shows a solid metal cuboid.

The areas of three of the faces are marked on the diagram.
The lengths, in cm, of the edges of the cuboid are whole numbers.



The metal cuboid is melted and made into cubes.
Each of the cubes has sides of length 2.5 cm.

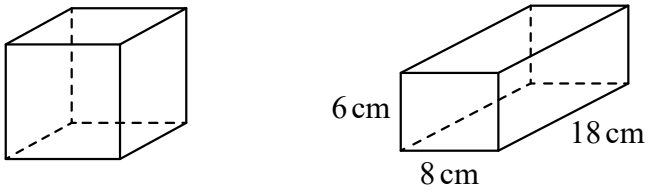
Work out the greatest number of these cubes that can be made.

.....

(Total for Question 6 is 5 marks)

Autumn 2019 Paper 2 Q9

7 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,

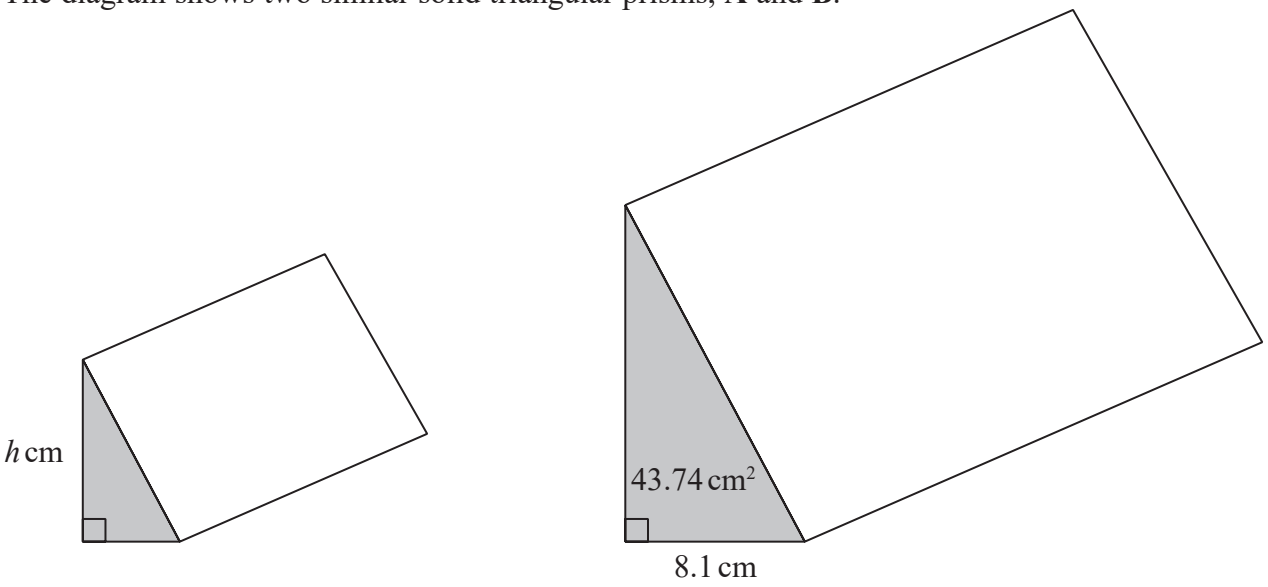
"The volume of the cube is equal to the volume of the cuboid."

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

(Total for Question 7 is 5 marks)

Autumn 2022 Paper 2 Q17

8 The diagram shows two similar solid triangular prisms, **A** and **B**.



Prism **A**

Prism **B**

The volume of prism **A** is 58.806 cm^3
The volume of prism **B** is 1587.762 cm^3

The cross section of each prism is a right-angled triangle.

For prism **B**
the length of the base of the triangle is 8.1 cm
the area of the triangle is 43.74 cm^2

The height of the triangle for prism **A** is h cm.

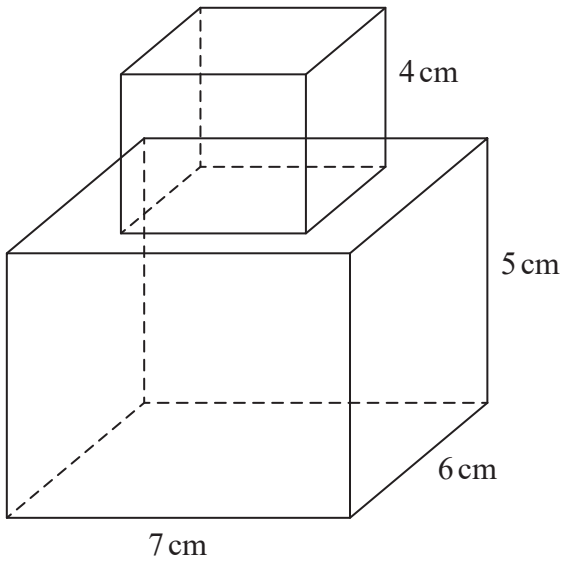
Work out the value of h.

h = ...

(Total for Question 8 is 4 marks)

Summer 2022 Paper 1 Q9

9 A cube is placed on top of a cuboid, as shown in the diagram, to form a solid.



The cube has edges of length 4 cm.
The cuboid has dimensions 7 cm by 6 cm by 5 cm.

Work out the total surface area of the solid.

..... cm^2

(Total for Question 9 is 3 marks)