Volume and Surface Area of Pyramids

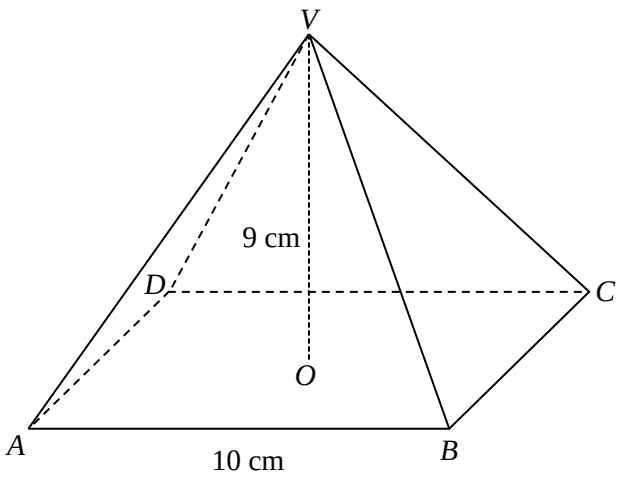
SCAN ME

REVISE THIS TOPIC

CHECK YOUR ANSWERS

SCAN ME

1 *VABCD* is a squared-based pyramid.
VO is the perpendicular height of the pyramid.



Work out the volume of the pyramid.

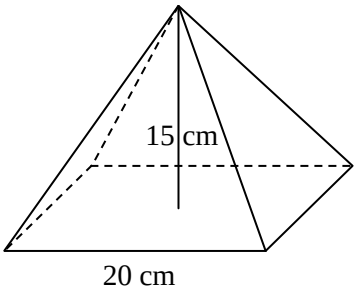
..... cm^3

(Total for Question 1 is 2 marks)

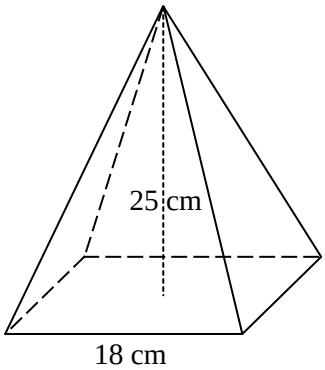
1

2 Here are two square based pyramids.

Pyramid A



Pyramid B



The volume of **Pyramid A** is less than the volume of **Pyramid B**.

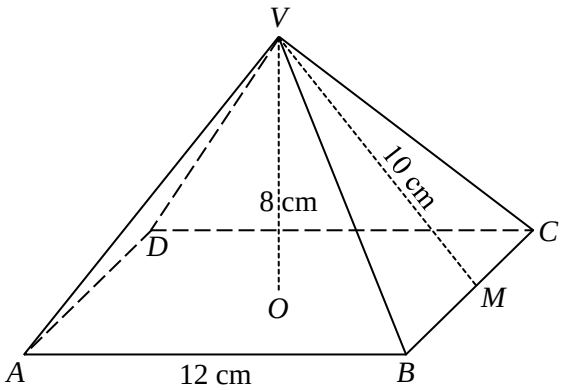
Work out how much less.

..... cm^3

(Total for Question 2 is 4 marks)

Solutions

3 *VABCD* is a squared-based pyramid.
VO is the perpendicular height of the pyramid.
M is the midpoint of *BC*.



(a) Work out the volume of the pyramid.

..... cm^3

(2)

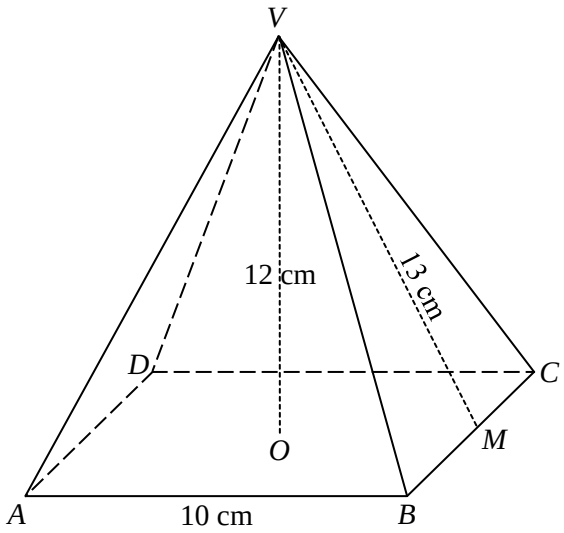
(b) Work out the surface area of the pyramid.

..... cm^2

(4)

(Total for Question 3 is 6 marks)

4 *VABCD* is a squared-based pyramid.
VO is the perpendicular height of the pyramid.
M is the midpoint of *BC*.



(a) Work out the volume of the pyramid.

..... cm^3

(2)

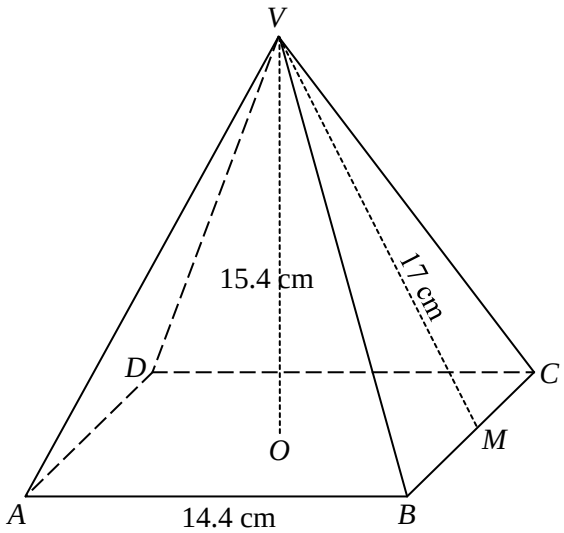
(b) Work out the surface area of the pyramid.

..... cm^2

(4)

(Total for Question 4 is 6 marks)

5 *VABCD* is a squared-based pyramid.
VO is the perpendicular height of the pyramid.
M is the midpoint of *BC*.



(a) Work out the volume of the pyramid.
Give your answer to the nearest integer.

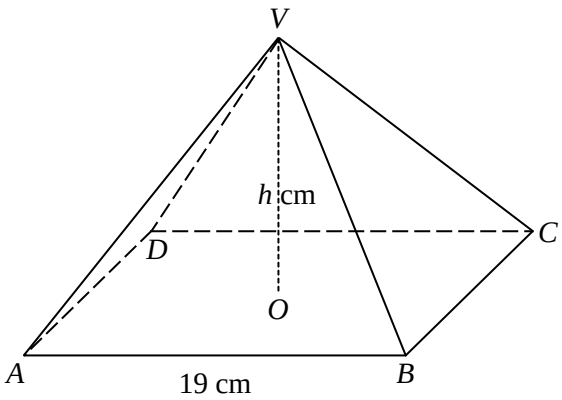
..... cm^3
(2)

(b) Work out the surface area of the pyramid.
Give your answer to the nearest integer.

..... cm^2
(4)

(Total for Question 5 is 6 marks)

6 *VABCD* is a squared-based pyramid.



The volume of the pyramid is 1500 cm^3

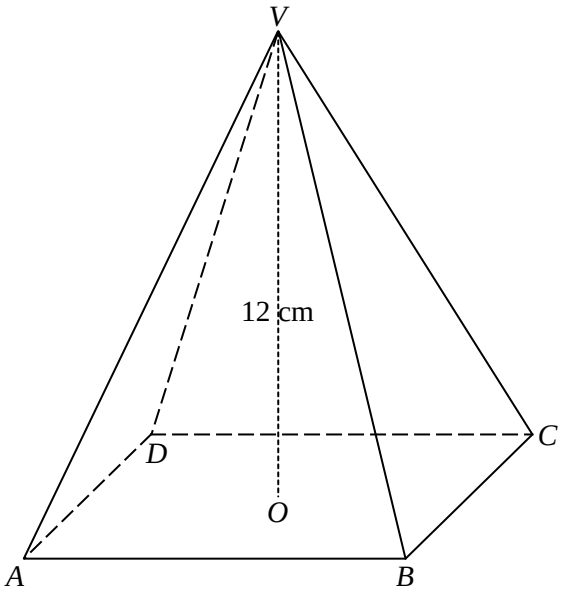
Work out the value of h, the perpendicular height of the pyramid.
Give your answer to 1 decimal place.

$h =$ ..... cm

(Total for Question 6 is 3 marks)

Solutions

7 *VABCD* is a squared-based pyramid.
VO is the perpendicular height of the pyramid.



The volume of the pyramid is 300 cm^3

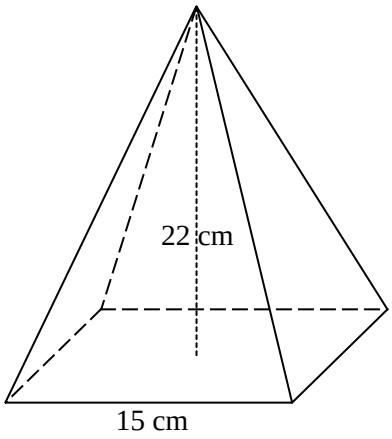
Work out the length of side *AB*.
Give your answer to 1 decimal place.

..... cm

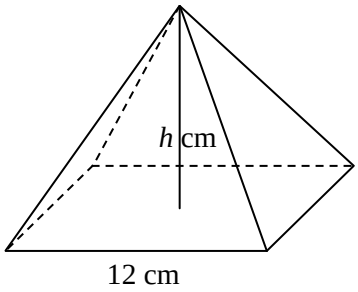
(Total for Question 7 is 4 marks)

8 *VABCD* is a squared-based pyramid.
VO is the perpendicular height of the pyramid.

Pyramid A



Pyramid B



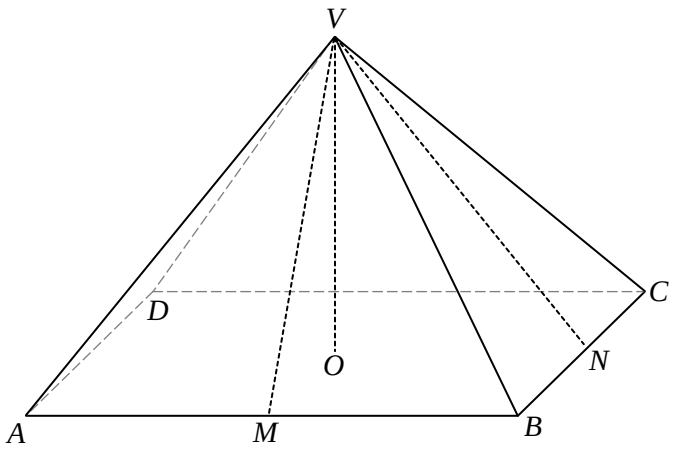
Volume of **Pyramid A** = 2 × Volume of **Pyramid B**

Work out the value of *h*, the perpendicular height of **Pyramid B**.
Give your answer to 1 decimal place.

h = ... cm

(Total for Question 8 is 5 marks)

9 Here *VABCD* is a pyramid with rectangular base *ABCD*.
VO is the perpendicular height of the pyramid.
M is the midpoint of *AB*.
N is the midpoint of *BC*.



VA = *VB* = *VC* = *VD*

AB = 36 cm
BC = 14 cm
VO = 24 cm
VM = 25 cm
VN = 30 cm

(a) Work out the volume of the pyramid.

..... cm^3
(2)

(b) Work out the surface area of the pyramid.

..... cm^2

(4)

(Total for Question 9 is 6 marks)

Solutions