Name:

Exam Style Questions

Volume of a Pyramid

Corbettmaths

Equipment needed: Calculator, pen

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

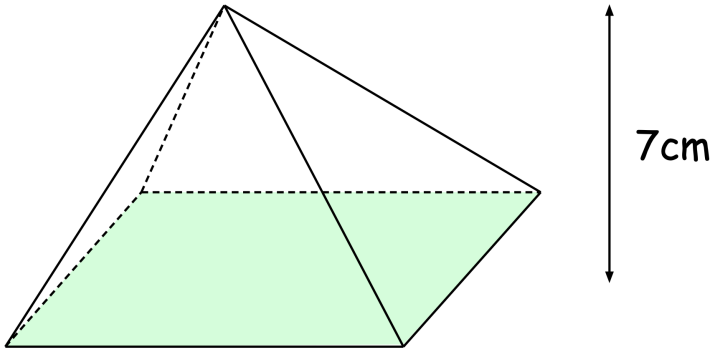
Video Tutorial

www.corbettmaths.com/contents

Video 360

Answers and Video Solutions

1. A pyramid is shown below.



The perpendicular height of the pyramid is 7cm
The area of the base of the pyramid is 60cm²

Find the volume of the pyramid.

.....cm³
(2)

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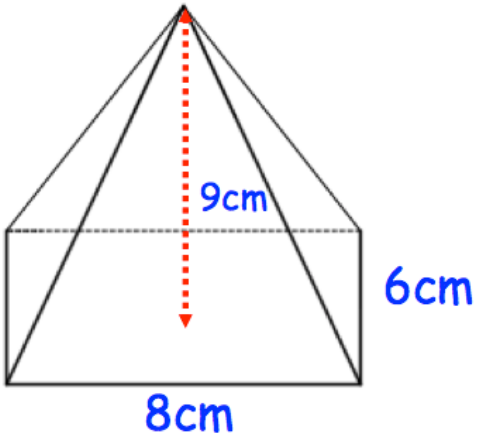
2. A rectangular-based pyramid is shown below.



Calculate the volume of the pyramid.

.....cm³
(3)

3. A square-based pyramid has a base with side length 15cm.
The perpendicular height of the pyramid is 10cm.

Calculate the volume of the pyramid.

.....cm³

(3)

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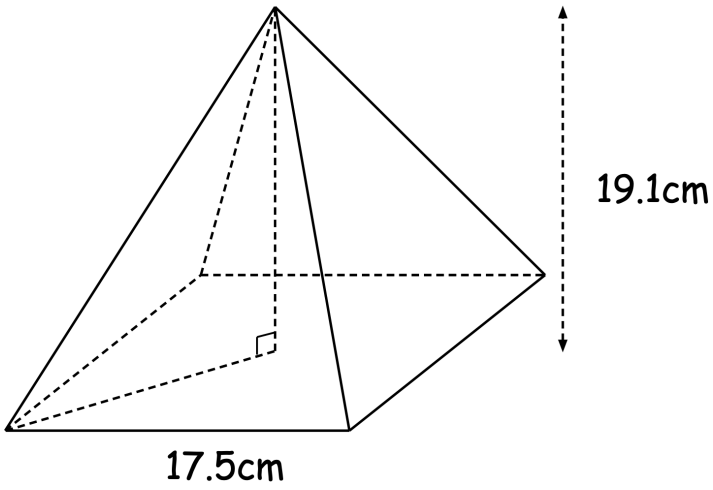
4. Below is a square based pyramid.

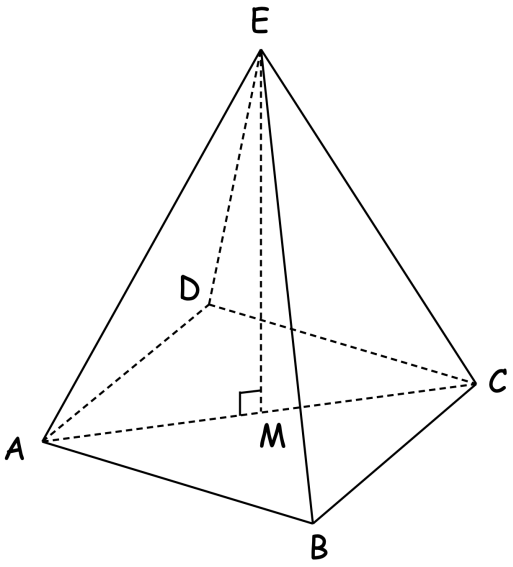


Find the volume of the pyramid.

.....cm³

(3)

5. ABCDE is a pyramid.
M is the midpoint of AC.

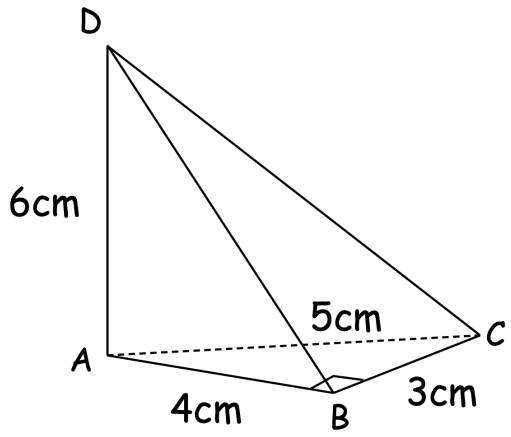


AB = 1.3m
BC = 90cm
ME = 1.45m

Work out the volume of the pyramid.

.....cm^3
(3)

6. A triangular-based pyramid, ABCD, is shown below.



AB = 4cm AC = 5cm BC = 3cm AD = 6cm

ABC is a right angle.

Calculate the volume of the pyramid.

.....cm³

(3)

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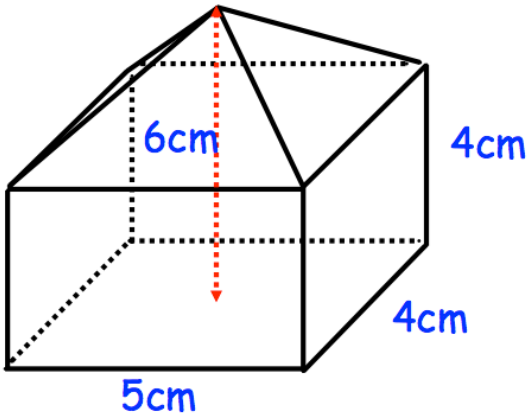
7. Calculate the volume of a pyramid having a square base of side 2.9cm and perpendicular height of 5cm.

.....cm³

(3)

8. Shown is a solid that is made of a pyramid and a cuboid.

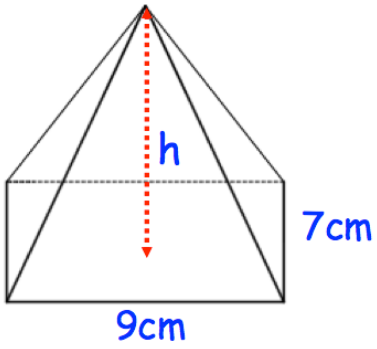


Calculate the volume of the solid.

.....cm³

(4)

9. Shown is a pyramid with volume 126cm³



Work out the perpendicular height of the pyramid, h.

.....cm

(3)

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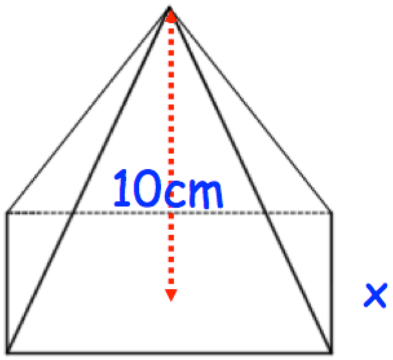
10. Shown is a square-based pyramid with volume 270cm³

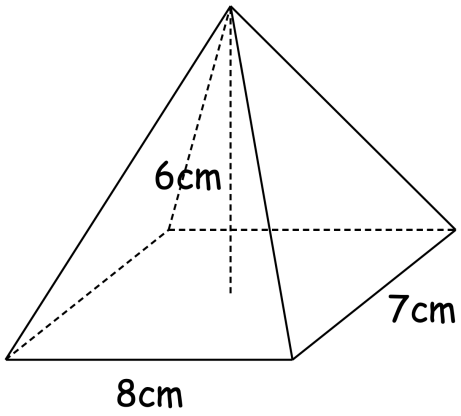


Find the length of the side marked x.

.....cm

(3)

11. A solid wooden paperweight is shown below.
The paperweight is a rectangular based pyramid.



The density of the wood is 0.65g/cm³

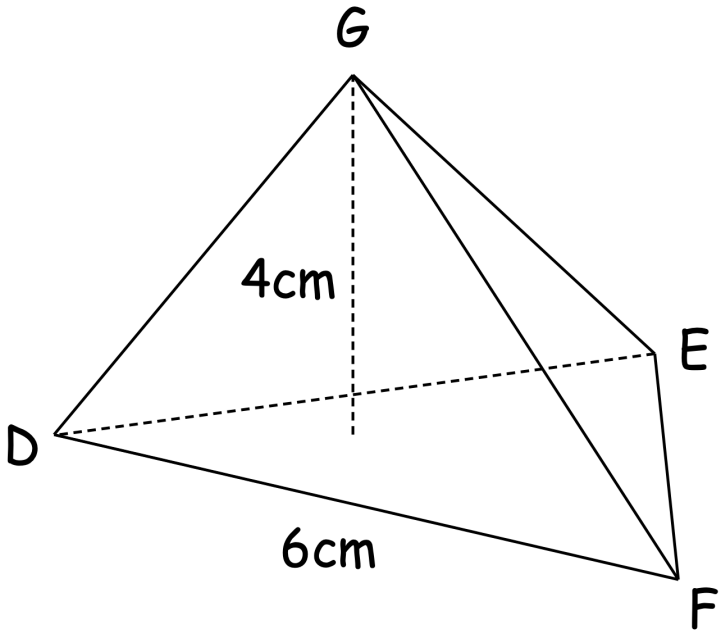
Find the mass of the paperweight.

.....g
(4)

12. DEFG is a triangle based pyramid.

The base DEF is an equilateral triangle with side 6cm.

The perpendicular height of the pyramid is 4cm.

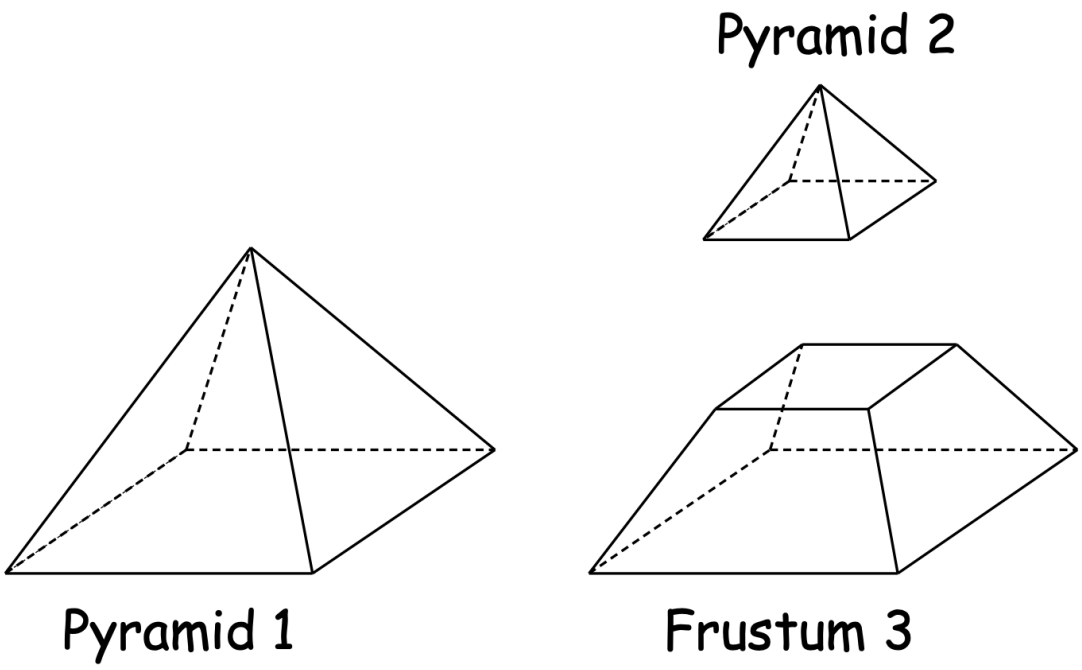


Calculate the volume of the pyramid.

.....cm^3

(4)

13. A square based pyramid 1 is divided into two parts:
a square based pyramid 2 and a frustum 3, as shown.



Pyramid 1 has a base of side length 8cm.
Pyramid 2 has a base of side length 4cm.
The perpendicular height of pyramid 1 is 10cm.

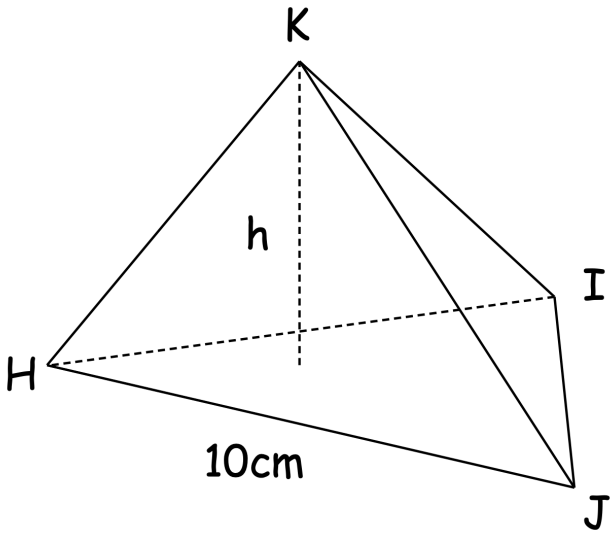
Calculate the volume of frustum 3.

.....cm³
(4)

14. HIJK is a triangle based pyramid.

The base HIJ is an equilateral triangle with side 10cm

The volume of the pyramid is 300cm³



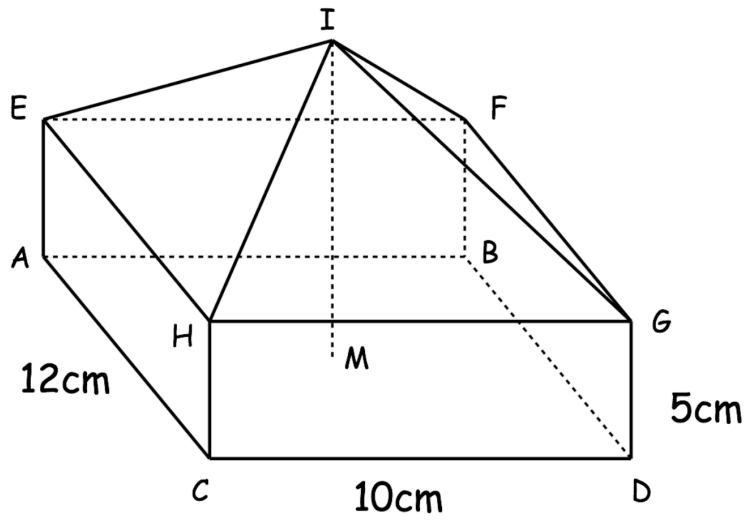
Calculate the perpendicular height, *h*, of the pyramid.

.....cm

(4)

15. Hannah created a glass paperweight.

The apex of the pyramid, I, is directly above the centre, M, of ABDC.



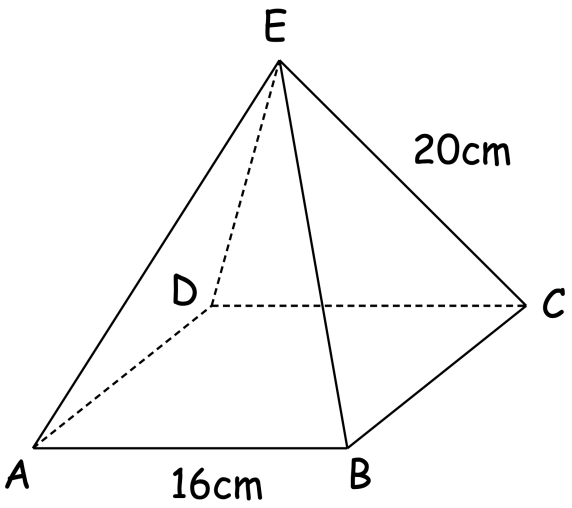
The density of the glass is 2.6g/cm³
The mass of the paperweight is 1705.6g

Find the height of the paperweight, IM.

.....cm

(5)

16. ABCDE is a square based pyramid.



AB = 16cm CE = 20cm

The point E is directly over the centre of the base ABCD.

Work out the volume of the pyramid.

.....cm^3

(4)