

Similar Figures Homework

22. The areas of two mathematically similar shapes are in the ratio 49 : 81



The length of the smaller shape is 24.5cm

Work out the length of the larger shape.

.....cm
(3)

23. The volumes of two mathematically similar solids are in the ratio 8 : 125

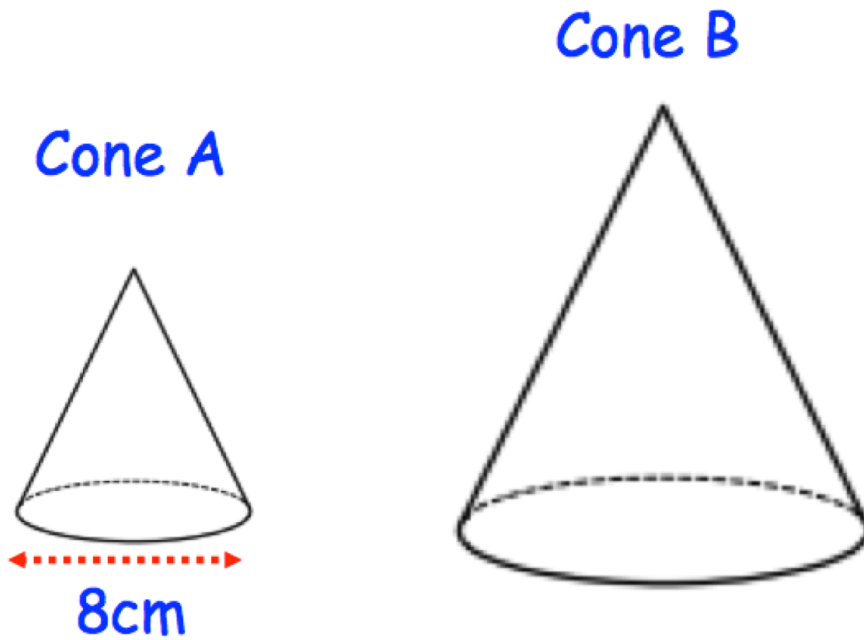


The surface area of the smaller solid is 24 cm²

Work out the surface area of the larger solid.

.....cm²
(3)

13.



Cone A and cone B are mathematically similar.
 The total surface area of cone A is 120cm^2
 The total surface area of cone B is 1080cm^2
 The diameter of cone A is 8cm .

Work out the diameter of cone B.

12. A swimming pool has surface area 300m^2
 The swimming pool is a prism of depth 110cm .



(a) Work out the volume of the swimming pool.
 Give your answer in m^3 .

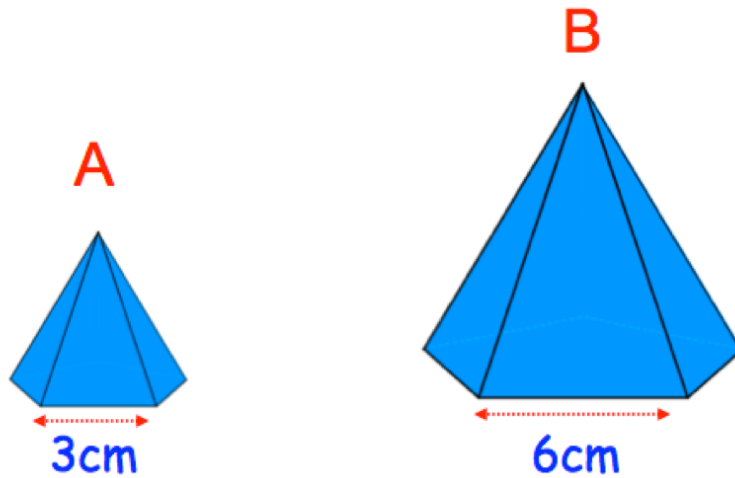
..... m^3
 (2)

A scale model of the swimming pool is made.
 The depth of the model swimming pool is 5.5cm

(b) Find the surface area of the model swimming pool.

..... m^2
 (2)

14. Below are two similar pyramids.



Pyramid A has a volume of 26cm^3

(a) Work out the volume of Pyramid B.

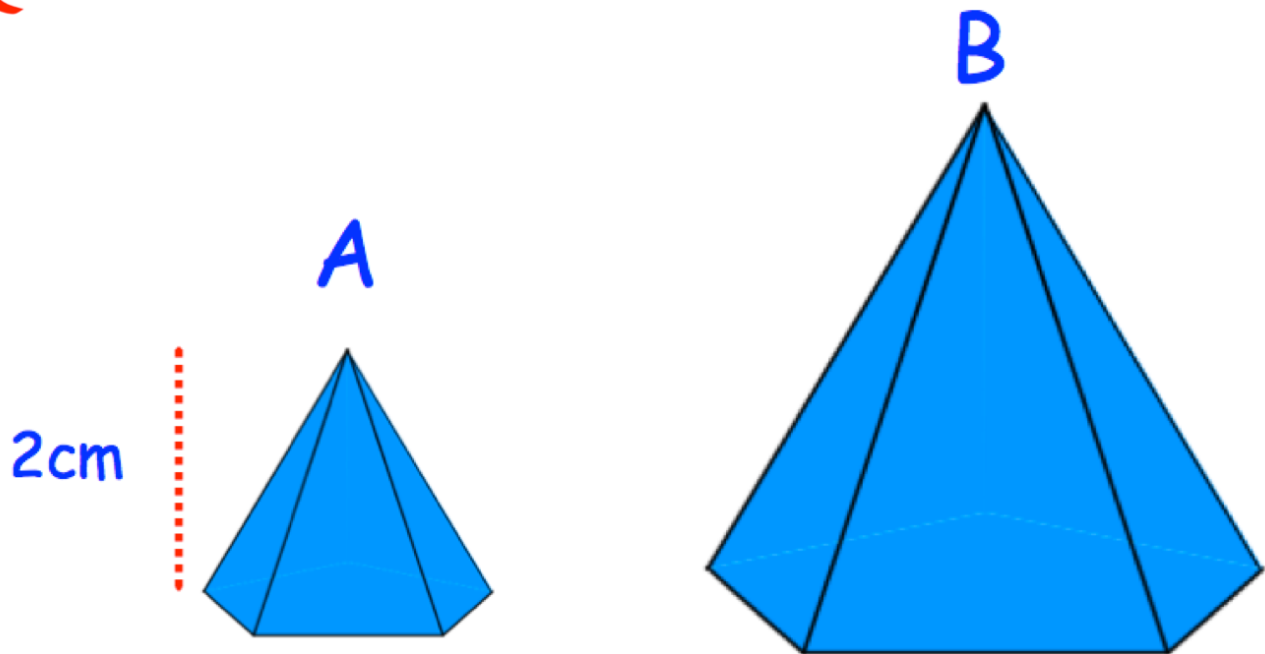
..... cm^3
(2)

Pyramid B has a total surface area of 224cm^2

(b) Work out the total surface area of Pyramid A.

..... cm^2
(2)

20. Two pyramids are mathematically similar.



Pyramid A has a surface area of 20cm^2
Pyramid B has a surface area of 320cm^2
The height of pyramid A is 2cm

(a) Work out the height of pyramid B.

.....cm
(3)

Pyramid A has a weight of 800g
Both pyramids are made of the same material.

(b) Work out the weight of pyramid B.
Include suitable units.