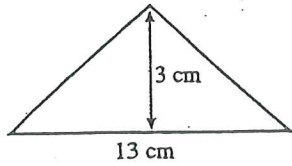


AREA - TRIANGLE, PARALLELOGRAM, TRAPEZIUM

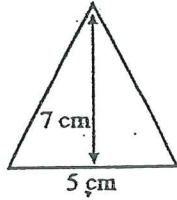
Show ALL your working to each of the following questions:

1 Work out the area of these triangles:

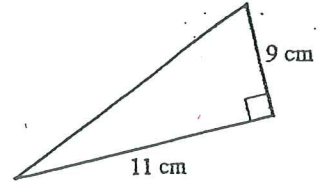
(a)



(b)

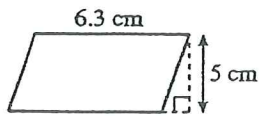


(c)

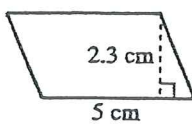


2 Work out the areas of these parallelograms:

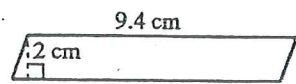
(a)



(b)

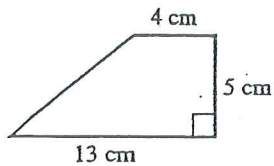


(c)

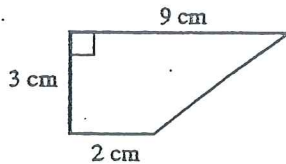


3 Work out the areas of these trapeziums:

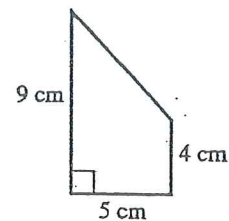
(a)



(b)

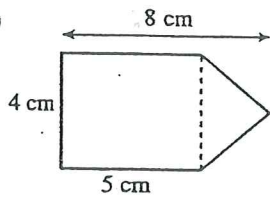


(c)

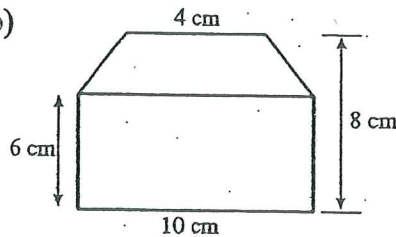


4 Work out the areas of these shapes:

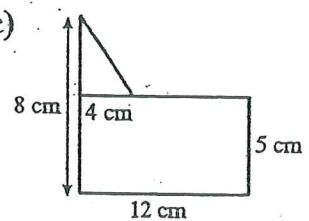
(a)



(b)

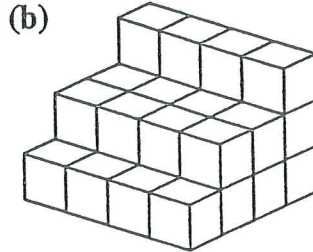
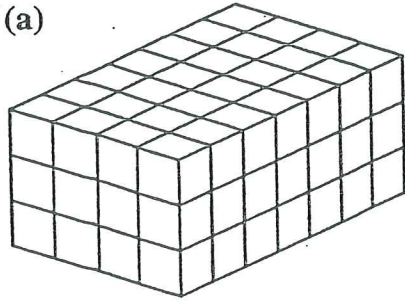


(c)



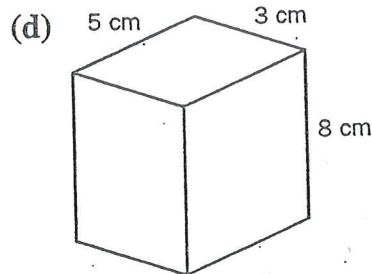
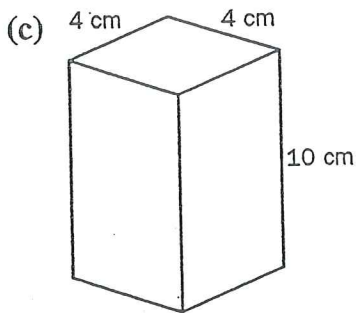
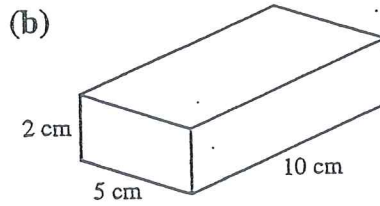
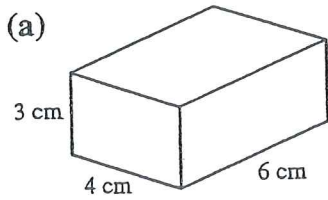
Volume and Surface Area

1. Find the volume of each of these solid shapes.
Each shape has been made using centimetre cubes.



2

Work out the volume and surface area:



Circles



$$\text{Circumference} = \pi \times \text{diameter}$$

$$C = \pi d$$

$$\text{Circumference} = 2 \times \pi \times \text{radius}$$

$$C = 2\pi r$$

- 1) Use $\pi = 3.14$. Calculate the circumference of each circle to 2 d.p., if the diameter is :
- a). 12 cm b). 20 cm c). 35 cm d). 90 cm e). 2 cm

- 2) Using the π button on your calculator, calculate the circumference of these circles to 2 d.p. when the radius is:



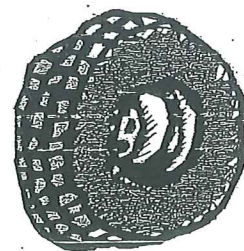
- a). 10 cm b). 55 cm c). 12 m d). 560 m e). 490 Km

- 3) The minute hand on a watch is 2.5 cm long. Over what area does this hand travel in 1 hour ?

- 4) A farmer has a circular field which is 170 metres across. He wishes to cover it with plastic sheeting. What area of sheeting does he require ?

- 5) A circular table is 1.8 metres across. What is the area of the table top ?

- 6) Rover is tied to a post in the middle of the garden with a rope 12 ft long. On what area of the garden can poor little Rover walk ?

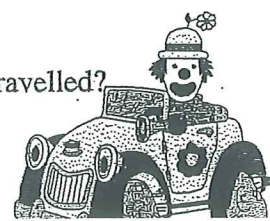


- 7) The minute hand on a watch is 1.5 cm long. What distance does the tip of this hand travel through in
- a). 1 hour ?
b). 1 day ?

- 8) A farmer has a circular field which is 250 metres across. He wishes to put a fence around the field. What length of fencing does he require ?

- 9) A bicycle tyre has a 40 cm radius.
- a). If the wheel travels through 1 complete revolution, how far has the bicycle travelled?
b). The wheel rotates 120 times, how far has the bicycle travelled ?

- 10) A car tyre has a 55 cm radius.
- a). If the wheel travels through 1 complete revolution, how far has the car travelled?
b). The wheel rotates 2500 times, how far has the car travelled
- i). in cm, ii). in m, iii). in Km ?



Volumes of Prisms

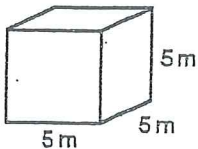
A prism is a solid with a uniform cross section (the same shape and size).

The volume of a prism = area of cross section \times length

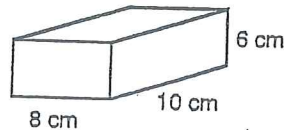


Find the volume of the following prisms.

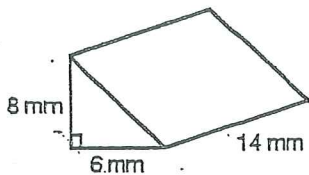
①



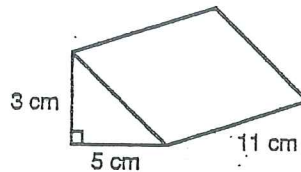
②



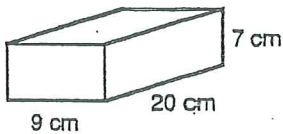
③



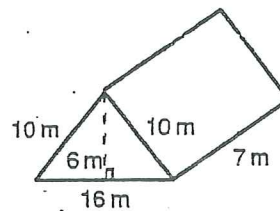
④



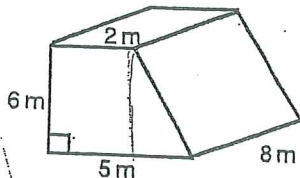
⑤



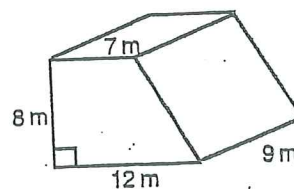
⑥



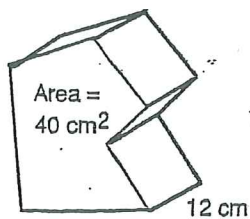
⑦



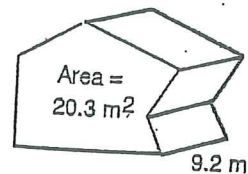
⑧



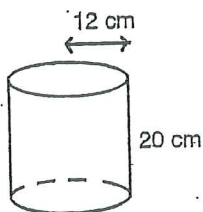
11



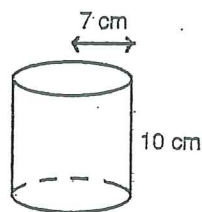
12



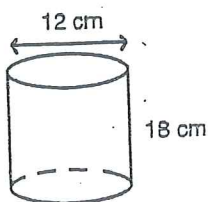
13



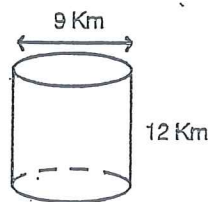
14



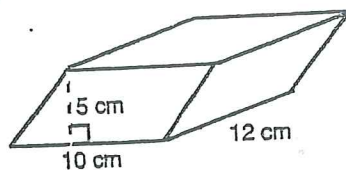
15



16



17



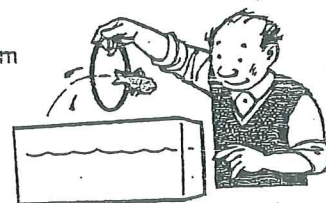
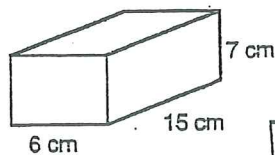
18

A rectangular box has a base 15 cm by 6 cm.

a). What is the area of the base ?

The height is 7 cm.

b). What is the volume of the box ?



19

Billy buys a fish tank. The dimensions are 32 cm by 91 cm by 35 cm.

a). Calculate the volume of the fish tank in cm^3 .

b). How many litres of water will it hold when full ?

($1000 \text{ cm}^3 = 1 \text{ litre}$)

