

Angles – Checkpoint Sec 1 Math**1. No.17**

The area of a rectangle is 30 cm^2 .

Work out this area in mm^2 .

..... mm^2 [1]

2. No.22

The area of a piece of land is 4.5 hectares.

Convert 4.5 hectares into square metres.

..... m^2 [1]

3. No.22

Yuri has a large rectangular card measuring 1.2 m by 0.8 m.

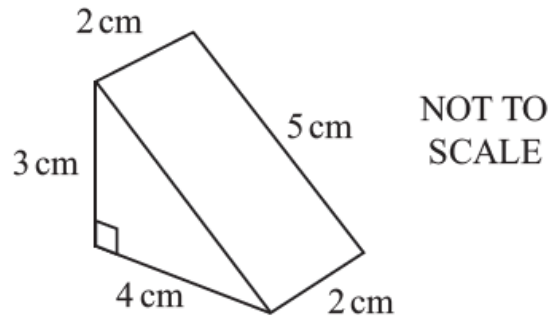
He wants to cut it up to make small rectangular cards each measuring 13 cm by 11.5 cm.

Work out the largest number of cards that he can make.

..... [3]

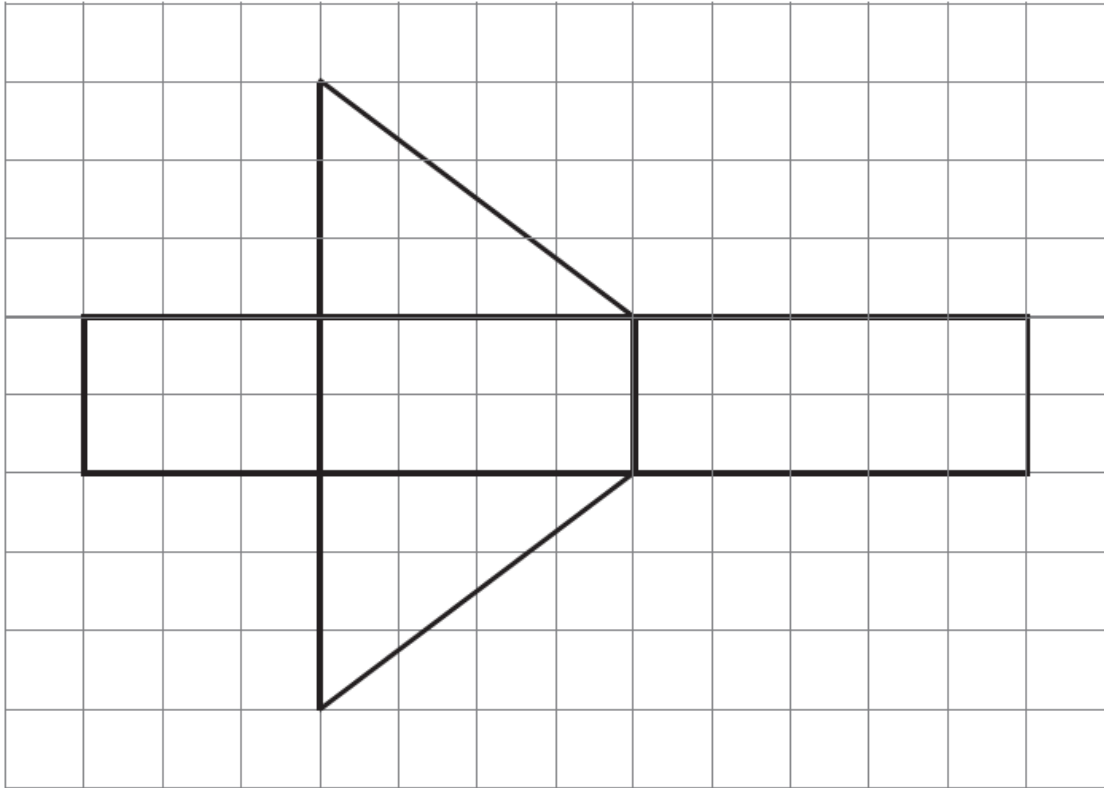
4. No.21

This is a triangular prism.



This is a net of the prism.

It is drawn on centimetre square paper.



Work out the surface area of the prism.

..... cm^2 [1]

5. No.25

Cube A has a volume of 125 cm^3 .

Cube B has a side length of 125 cm .

Cube C has a surface area of 125 cm^2 .

Write cubes A, B and C in order of size starting with the smallest.

..... [2]
smallest largest

6. No.13

Carlos builds a wooden frame.



NOT TO
SCALE

He needs two 45 cm lengths of wood and two 60 cm lengths of wood.
Carlos has a 2 metre length of wood.

Tick (✓) to show if Carlos has enough wood to build the frame.

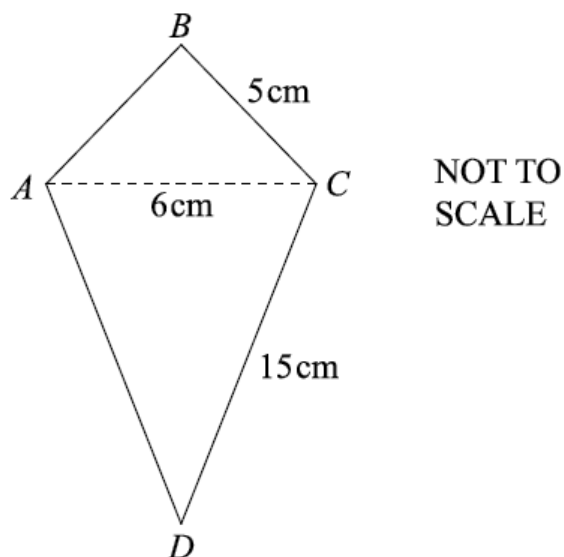
Yes ☐ No ☐

Show your working.

[2]

7. No.25

Here is a kite.



$BC = 5\text{ cm}$, $CD = 15\text{ cm}$ and $AC = 6\text{ cm}$.
 AC and BD are perpendicular.

Find the length of BD .

..... cm [3]

8. No.4

Eva measures the diameter of a circle as 15.9 cm.
 She uses a calculator to work out the area.
 She says,

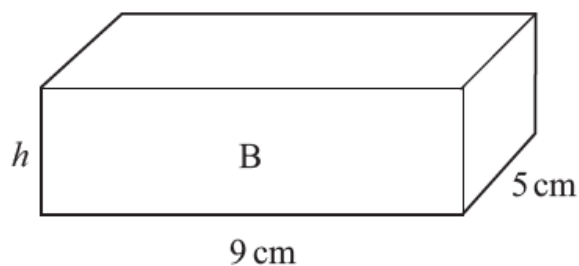
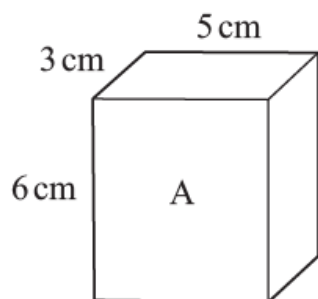


Round this answer to an appropriate degree of accuracy.

..... cm² [1]

9. No.10

The diagram shows two cuboids.



NOT TO
SCALE

The cuboids have **equal** volume.

Find the height, h , of cuboid B.

$h =$ cm [2]

10. No.20

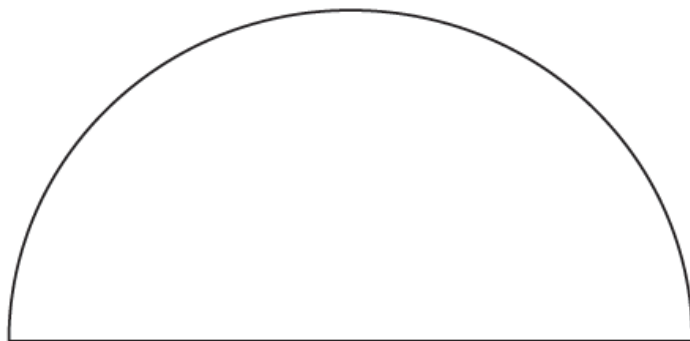
A farm has 150 hectares of land.

Write this area in square metres.

..... m^2 [1]

11. No.23

The diagram shows a semicircle.



NOT TO
SCALE

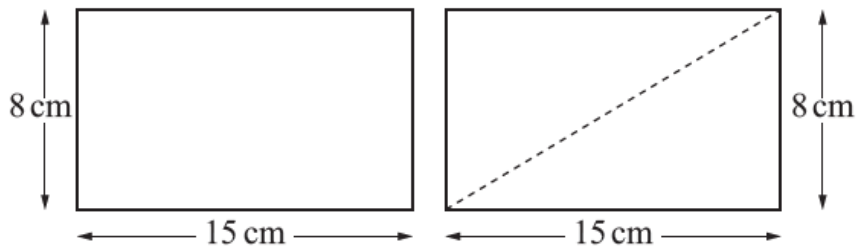
The diameter of the semicircle is 12 cm.

Calculate the perimeter of the semicircle.

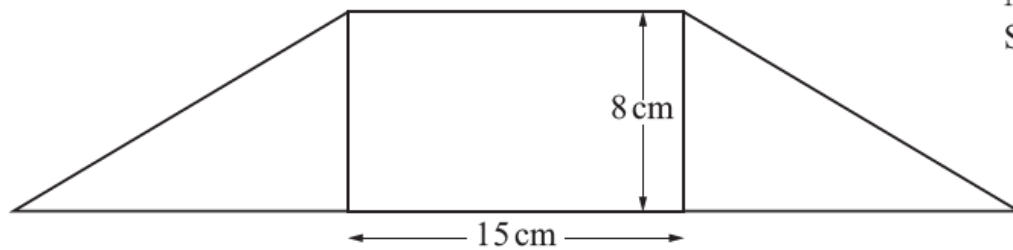
..... cm [2]

12. No.24

Here are two rectangles.

NOT TO
SCALE

The second rectangle is cut in half and joined to the first rectangle to make a new shape.

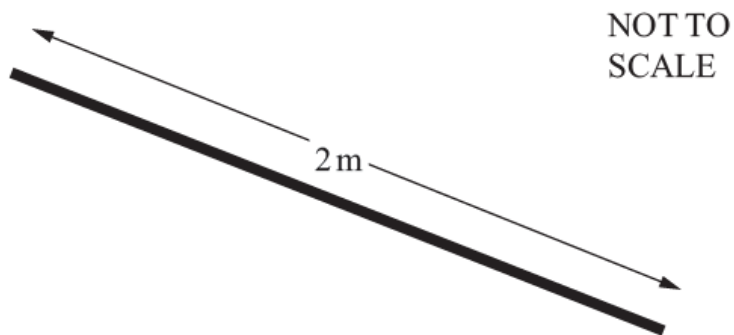
NOT TO
SCALE

Calculate the perimeter of the new shape.

..... cm [2]

13. No.27

Ahmed has a rod 2 metres long.



He cuts the rod into four pieces and uses them to make a rectangle.



The length of the rectangle is 3 times the width.

Calculate the area of the rectangle in **square centimetres**.

.....cm² [3]

14. No.14

The thickness of a pile of paper is 24 mm.

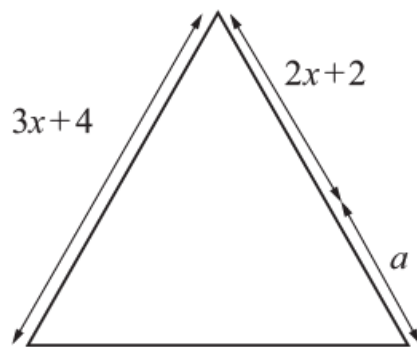
Each sheet is the same and has a thickness of $\frac{2}{11}$ mm.

Find the number of sheets of paper in the pile.

..... [2]

15. No.18

The diagram shows an **equilateral** triangle.
All measurements are in cm.



NOT TO
SCALE

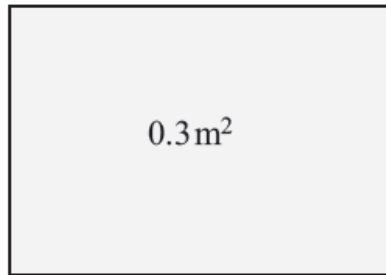
The perimeter of the triangle is 57 cm.

Find the length of a .

..... cm [3]

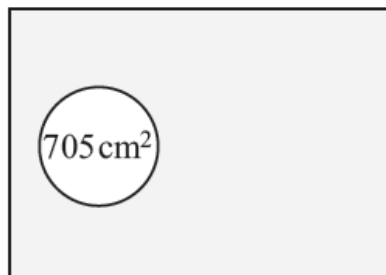
16. No.22

A piece of paper has an area of 0.3 m^2 .



NOT TO
SCALE

A circle of area 705 cm^2 is cut out of the piece of paper.



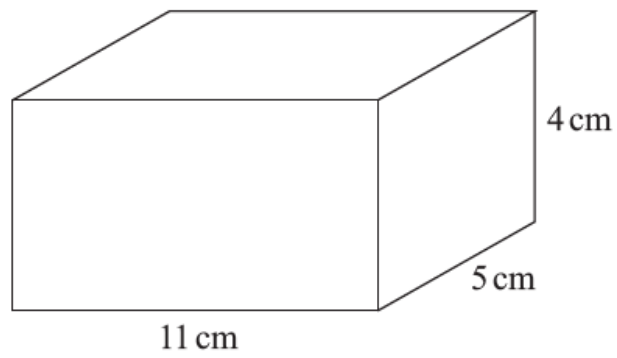
NOT TO
SCALE

Work out the area of the paper that remains.
Give your answer in square metres.

..... m^2 [2]

17. No.3

The diagram shows a cuboid.



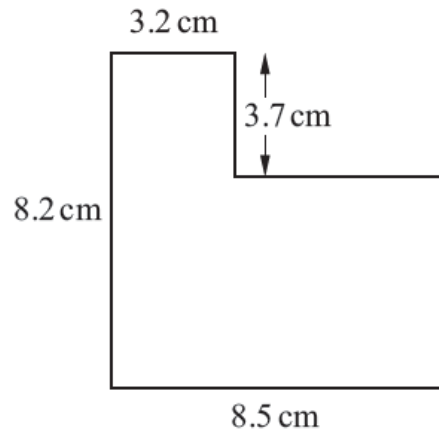
NOT TO
SCALE

Calculate the volume of the cuboid.

..... cm^3 [1]

18. No.5

This shape is made from two rectangles.

NOT TO
SCALE

Calculate the area of the shape.

..... cm^2 [2]

19. No.8

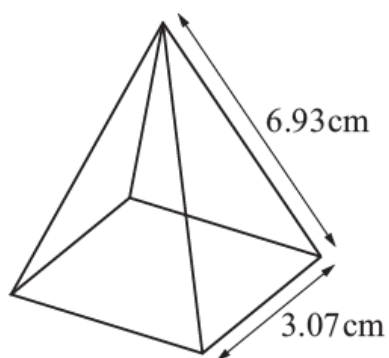
Write a number in the box to make this statement correct.

$$5 \text{ cm}^2 = \boxed{} \text{ mm}^2$$

[1]

20. No.17

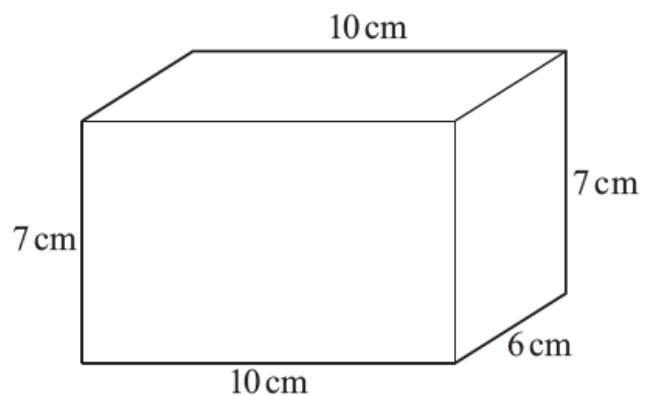
This square-based pyramid is made of wire.
 The edges of the base all have length 3.07 cm.
 The other edges all have length 6.93 cm.



NOT TO
SCALE

Find the total length of wire.

..... cm [2]

21. No.6

NOT TO
SCALE

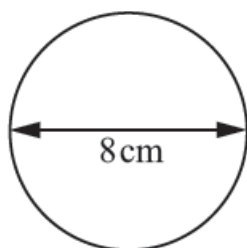
Find the volume of the cuboid.

Give the units of your answer.

..... [2]

22. No.14

A circle has diameter 8 cm.



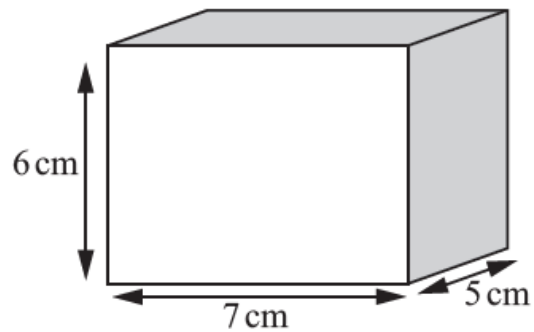
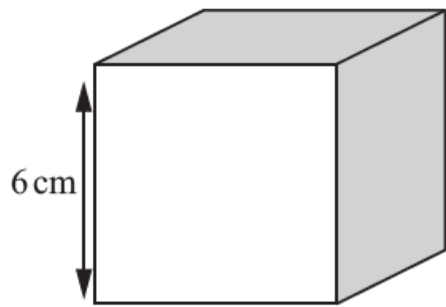
NOT TO
SCALE

Calculate the circumference of the circle.

..... cm [2]

23. No.5

The diagram shows a cube and a cuboid.



NOT TO
SCALE

Tick (✓) to show which has the larger volume.

Cube ☐ Cuboid ☐

You must show how you calculated your answer.

[2]

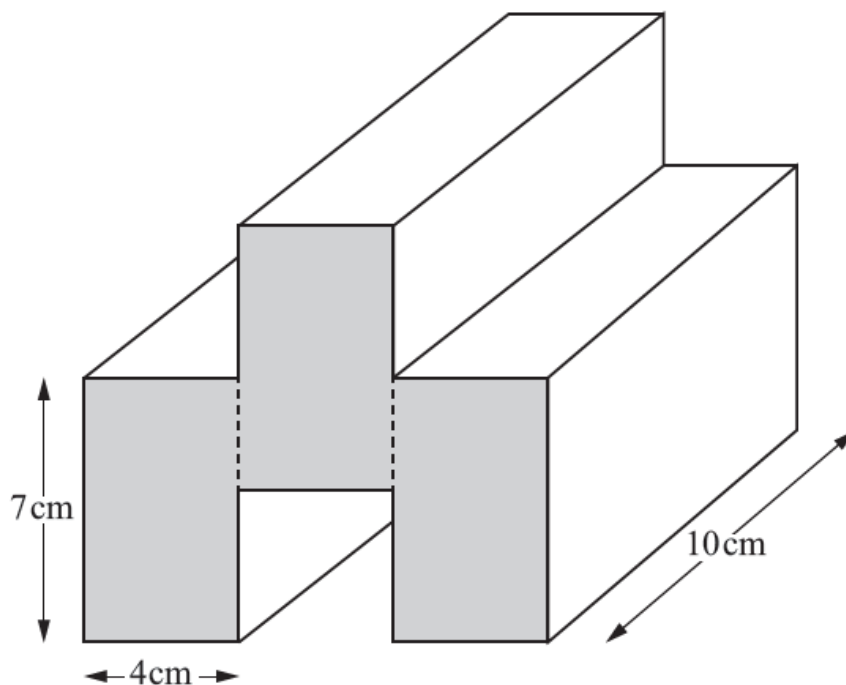
24. No.10

The diagram shows a prism.

The cross-section can be divided into three identical rectangles.

Each rectangle measures 7 cm by 4 cm.

The prism is 10 cm long.



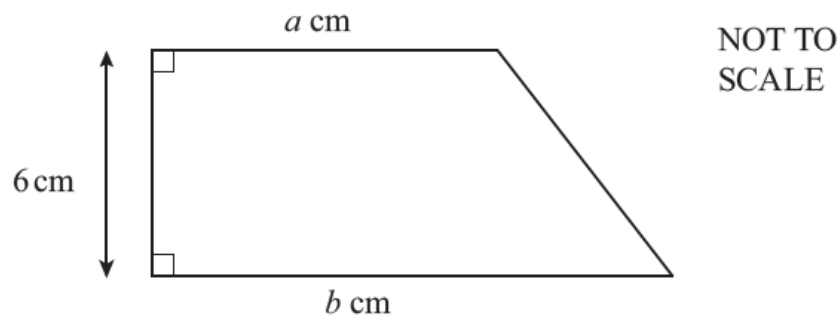
NOT TO
SCALE

Work out the volume of the prism.

..... cm^3 [2]

25. No.19

The diagram shows a trapezium.

The area of the trapezium is 30 cm^2 . a and b are both whole numbers with $a < b$.Work out one possible pair of values for a and b .

$a =$

$b =$ [2]

26. No.22

Draw a ring around the **largest** measurement in the list.4200 cm^3 54 000 mm^3

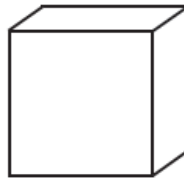
45 litres

52 000 ml

[1]

27. No.24

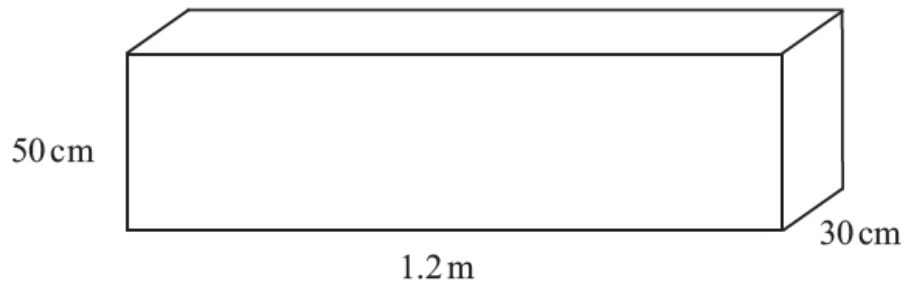
Cubes with side length 3 cm are packed into a larger cuboid box.



3 cm

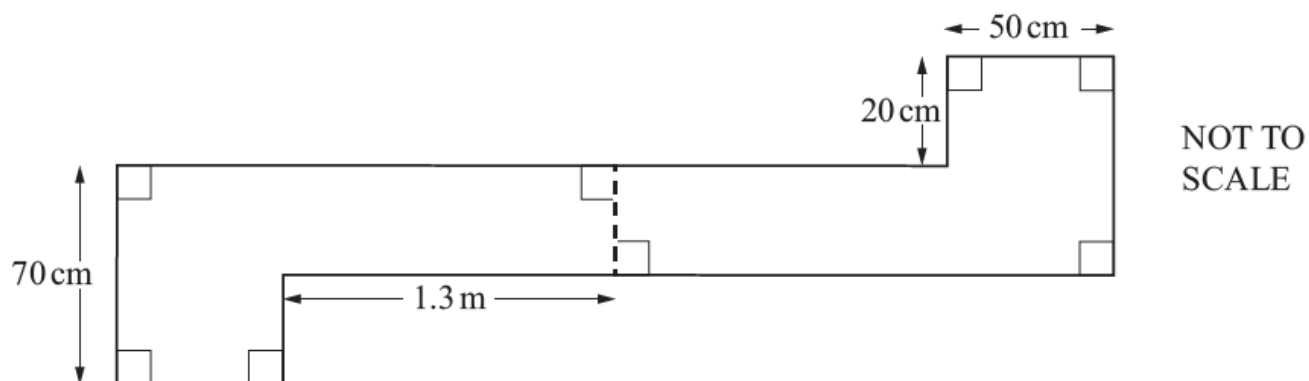
NOT TO
SCALE

Work out how many of the cubes fit inside this box.

NOT TO
SCALE

..... [3]

28. No.9

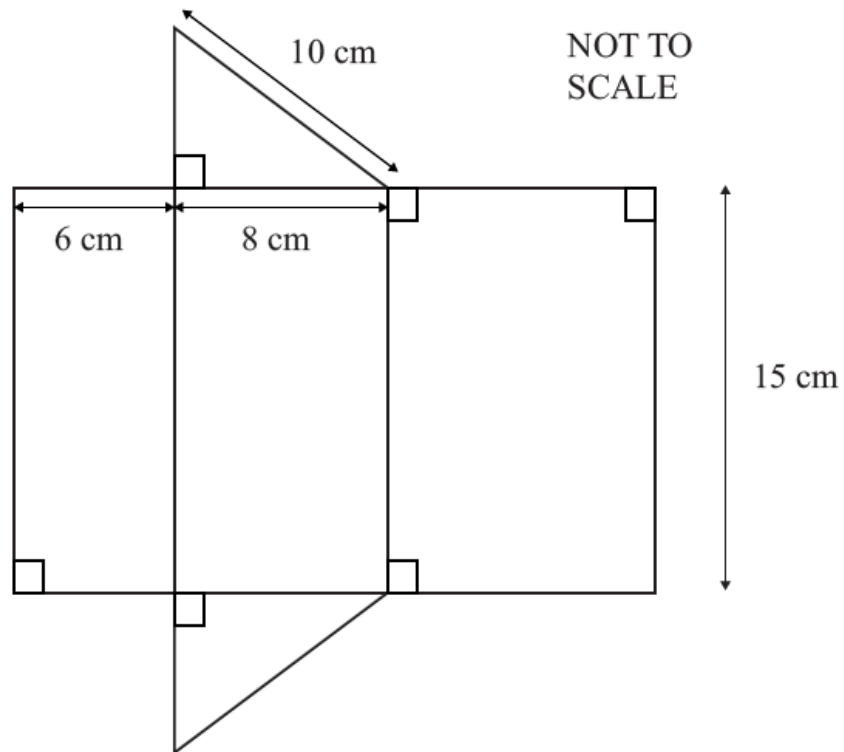


Work out the perimeter of the shape.
Give your answer in centimetres.

..... cm [3]

29. No.19

The diagram shows the sketch of a net of a triangular prism.



Work out the total surface area of the prism.

..... cm^2 [3]

30. No.19

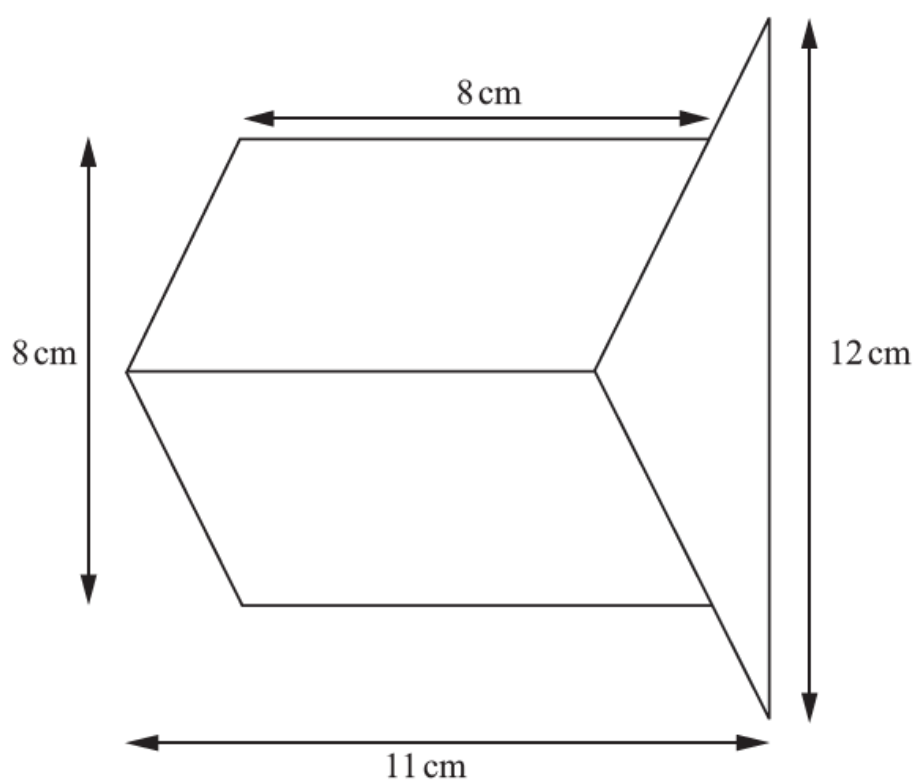
A bath has a volume of 0.25 m^3 .

Convert 0.25 m^3 to cm^3 .

..... cm^3 [1]

31. No.29

The diagram shows a shape made from two identical parallelograms and a triangle.

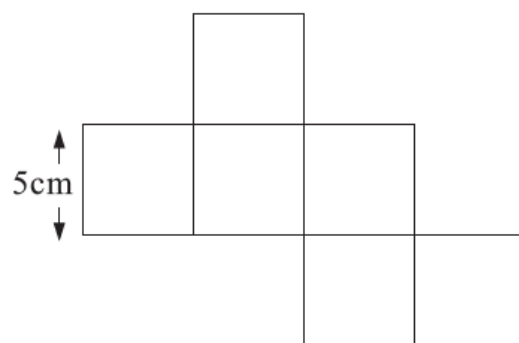


Calculate the total area of the shape.

..... cm^2 [2]

32. No.2

This is a diagram of the net of a cube.

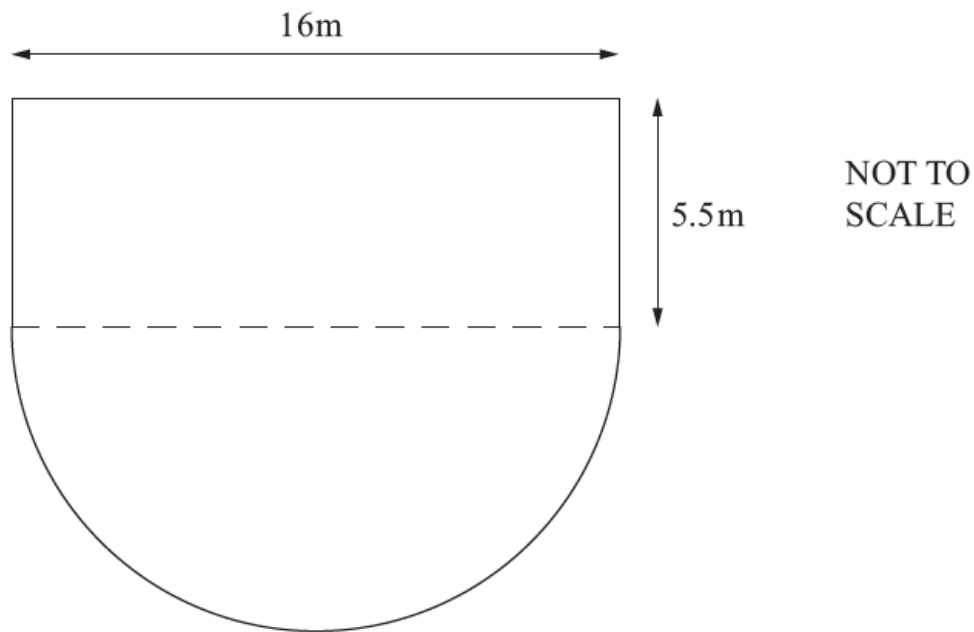


Calculate the volume of the cube.

..... cm^3 [1]

33. No.21

The diagram shows the floor plan of the stage at a theatre.

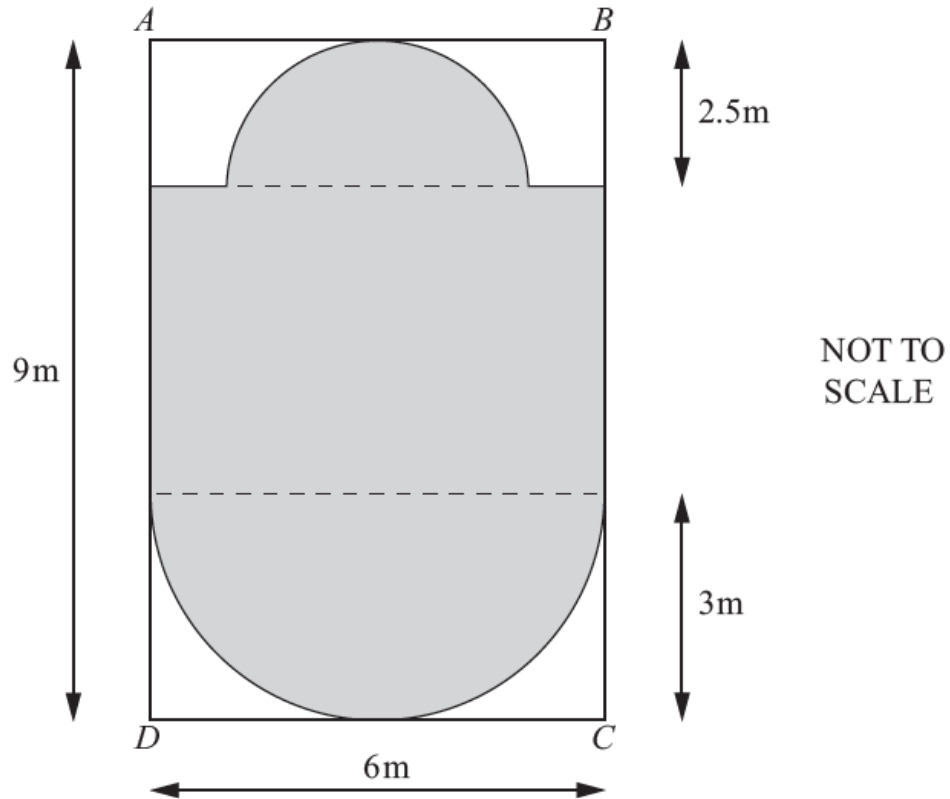


The stage is made from a rectangle and a semicircle.
The rectangle is 16m long and 5.5m wide.

Work out the **total** area of the stage.
Give your answer correct to **two significant figures**.

..... m^2 [4]

34. No.23

The diagram shows a garden $ABCD$.

The shaded area is covered with grass.

The area covered with grass is formed from two semicircles and a rectangle.

Calculate the area covered with grass.

..... m^2 [3]