

Walking Talking - Area and Perimeter

1.

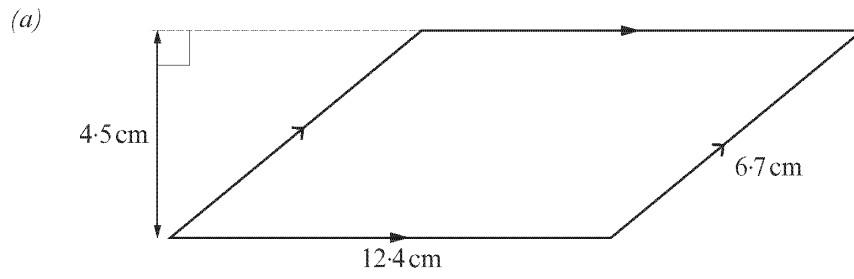


Diagram not drawn to scale

Calculate the area of the parallelogram.

.....

.....

.....

[2]

(b) The area of a circle is 34.6 cm^2 .
Calculate the radius of the circle.

.....

.....

.....

.....

.....

[3]

(c) The lengths, in centimetres, of the five sides of a pentagon are:

$$x \quad x + 2 \quad 2x \quad 3x + 5 \quad 4x$$

The perimeter of the pentagon is 95 centimetres.

Set up an equation in terms of x and solve it to find the value of x .

.....

.....

.....

.....

.....

.....

$$x = \dots\dots\dots$$

[3]

2.

(a)

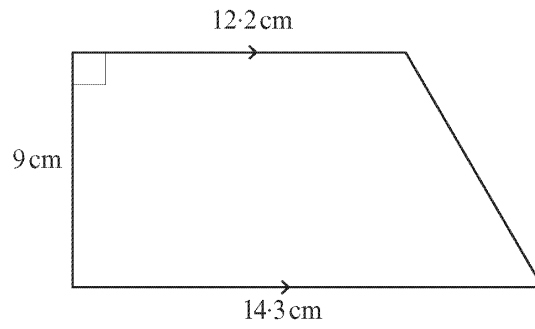


Diagram not drawn to scale

Calculate the area of the trapezium shown above giving the units for your answer.

.....

.....

.....

.....

[3]

(b)

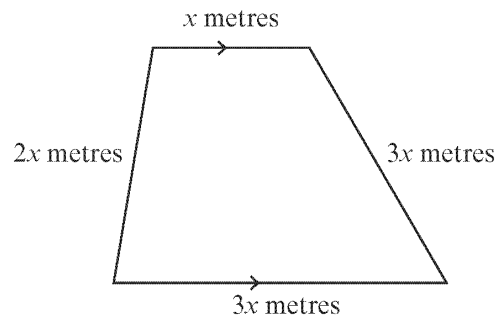


Diagram not drawn to scale

The perimeter of this trapezium is 108 metres.
Find the length of each side of this trapezium.

.....

.....

.....

.....

.....

[3]

3.

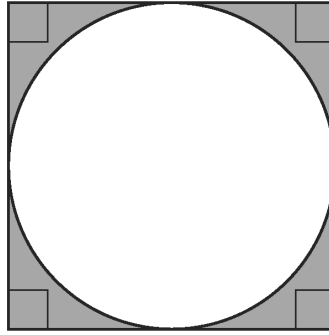


Diagram not drawn to scale

In the diagram above, the circle has a diameter of 12 cm.
Calculate the area of the shaded part.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

[4]

4.

A company is making cylinders to package plastic rods.
Each cylinder is made using a rectangular piece of card and two circular pieces of metal.
The net of one of these cylinders is shown below.

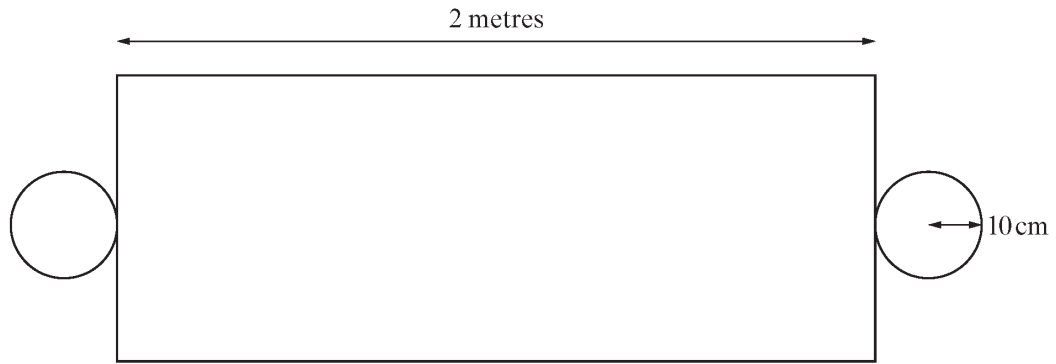


Diagram not drawn to scale

The radius of each circular end is 10 cm.
The cylinder is of length 2 metres.
Taking $\pi = 3.14$, calculate the **area of the rectangular piece of card**.
State the units of your answer.

.....

.....

.....

.....

.....

.....

.....

.....

.....

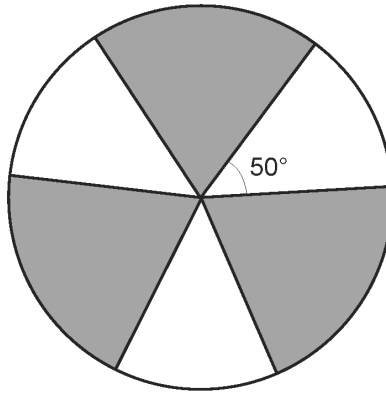
.....

.....

[5]

5.

A circular logo, with radius 8 cm, is shown below.



All three white sectors are equal in size and shape.
All three shaded sectors are equal in size and shape.

(a) Calculate the total area of the shaded sectors. [4]

.....

.....

.....

.....

.....

.....

.....

(b) The whole perimeter of all the shaded sectors is to be drawn in red.
Calculate the total length of all these red boundary lines. [4]

.....

.....

.....

.....

.....

.....

.....

6.

A gardener is marking out the border of a flowerbed.
The flowerbed is in the shape of a sector AOB of a circle centre O as shown below.

The complete border is 28 metres long.
 $OA = OB = 8.6\text{ m}$.

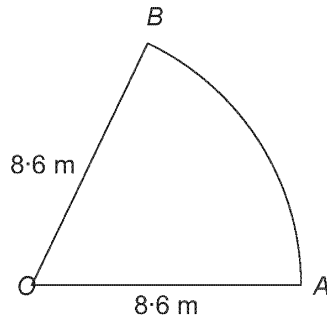


Diagram not drawn to scale

(a) Calculate the size of \widehat{AOB} . [4]

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

7.

The Earth is approximately spherical.



- (a) The radius of the Earth is 6378.1 km.
Calculate the circumference of the Earth, giving your answer in standard form correct to 3 significant figures.

.....
.....
.....
.....

[4]

- (b) The total surface area of the Earth is approximately 5.112×10^8 square kilometres.
Oceans cover an approximate area of 3.618×10^8 square kilometres and the remainder of the surface is covered by land.
Calculate the area of the Earth covered by land, giving your answer in standard form.

.....
.....
.....

[2]