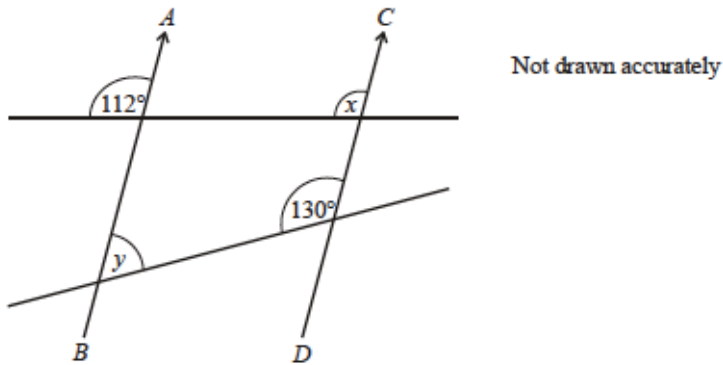


Topic 5 Angles, area and volume (Pre-TT) [41]

1.

In the diagram, AB is parallel to CD .



(a) State the value of x .
Give a reason for your answer.

(2)

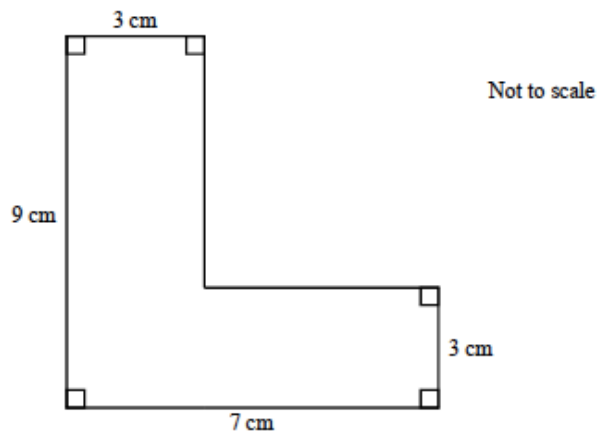
(b) Find the value of y .

(2)

(Total 4 marks)

2.

Calculate the area of this shape.

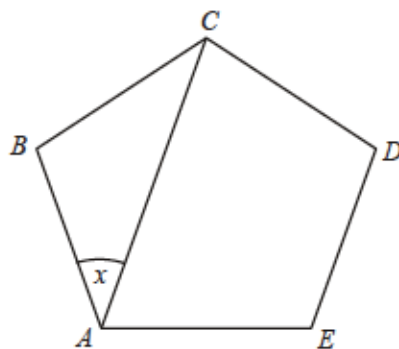


You **must** show all your working.

(Total 3 marks)

3.

$ABCDE$ is a regular pentagon.



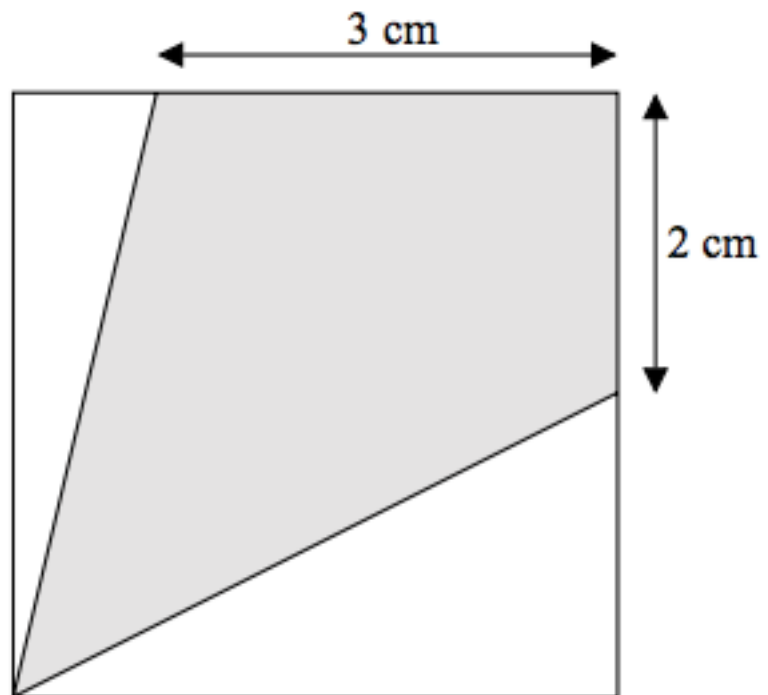
Not drawn accurately

Work out the value of x .

(Total 4 marks)

4. Non-calculator

The diagram shows a square with perimeter 16 cm.

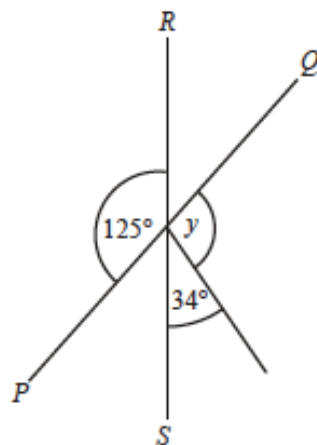


Work out the proportion of the area inside the square that is shaded.

(Total 5 marks)

5.

PQ and RS are straight lines.



Not drawn accurately

Work out the value of y .

(Total 3 marks)

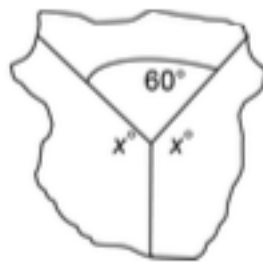
6.

A cuboid is made from centimetre cubes.
The area of the base of the cuboid is 5 cm^2 .
The volume of the cuboid is 10 cm^3 .
Work out the surface area of the cuboid.

(Total 3 marks)

7. Non-calculator

Three **regular** polygons meet at a point.



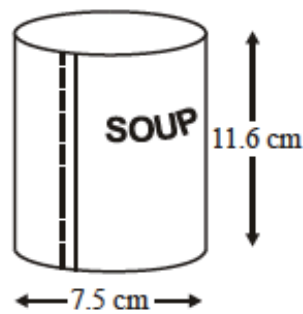
Not to scale

Find the number of sides of each of the three regular polygons in the diagram.

(Total 6 marks)

8.

The diagram shows a cylindrical tin of soup of diameter 7.5 cm and height 11.6 cm.



Not to scale

(a) Calculate the volume of the cylinder.

(3)

(b) A sheet of paper is wrapped around the curved surface of the tin with a 1 cm overlap along the dotted line shown in the diagram.

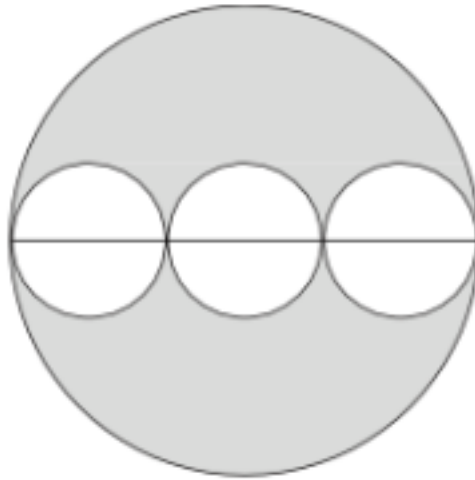
Calculate the area of the paper.

(4)

(Total 7 marks)

9. Non-calculator

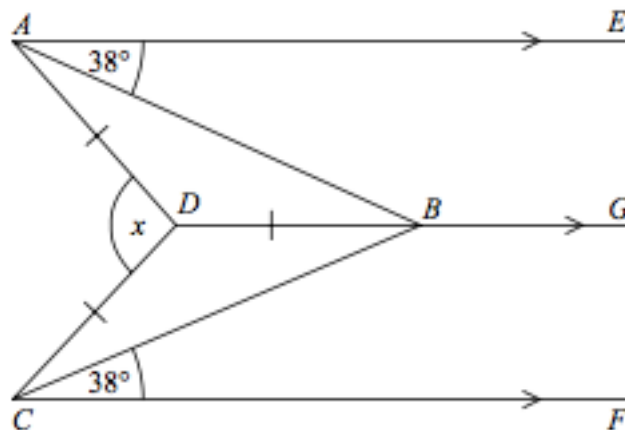
Three identical small circles are drawn inside one large circle, as shown in the diagram. The centres of the small circles lie on the diameter of the large circle.



Find the fraction of the large circle that is shaded.

(Total 3 marks)

10. Non-calculator



AE , DBG and CF are parallel.

$DA = DB = DC$.

Angle $EAB = \text{angle } BCF = 38^\circ$

Work out the size of the angle marked x .

You must show your working.

(Total 3 marks)