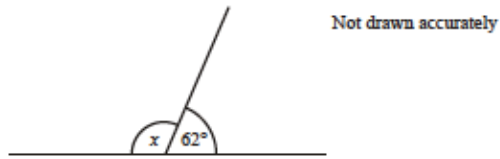


Topic 5 Angles, area and volume (Post-TT) [38]

1.
(a)



(i) Which of these words describes angle x ?

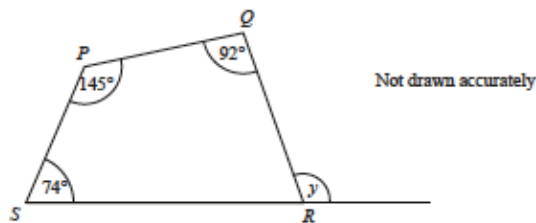
acute alternate obtuse opposite reflex right angle

(1)

(ii) Calculate the value of x .

(2)

(b) The diagram shows a quadrilateral $PQRS$.
Angle $P = 145^\circ$, angle $Q = 92^\circ$ and angle $S = 74^\circ$.



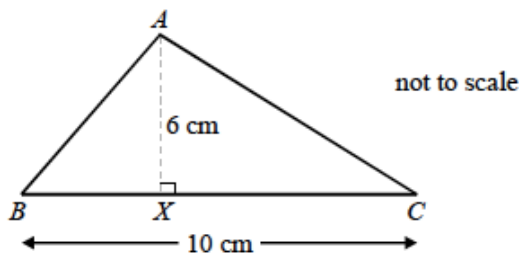
Calculate the value of the exterior angle at R , marked y on the diagram.

(3)

(Total 6 marks)

2.

The diagram shows a triangle ABC . The base $BC = 10$ cm.
The perpendicular height $AX = 6$ cm.



Calculate the area of the triangle.

(Total 2 marks)

3.

The diagram shows part of a regular polygon.

Each interior angle is 162° .

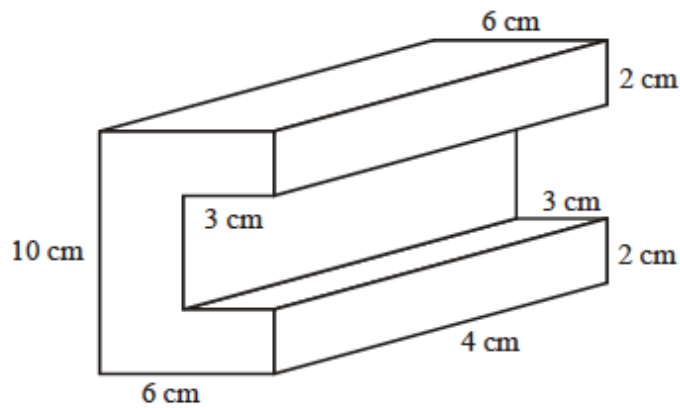


Calculate the number of sides of the polygon.

(Total 3 marks)

4.

The diagram shows a beam of uniform cross-section and length 4 metres.



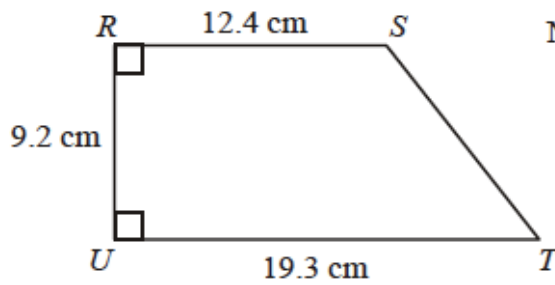
Not to scale

Calculate the volume of the beam.
Give your answer in cubic centimetres.

(Total 5 marks)

5.

In the diagram, $RS = 12.4$ cm, $RU = 9.2$ cm and $UT = 19.3$ cm
The angles at R and U are 90°



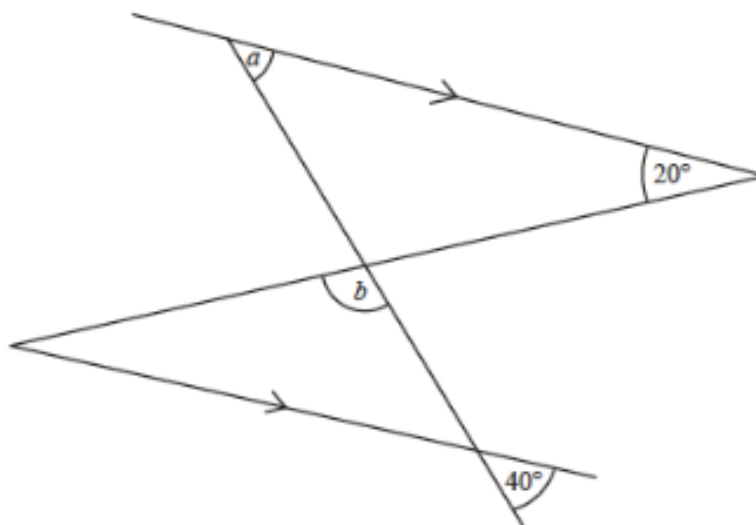
Not drawn accurately

Calculate the area of $RSTU$.

(Total 3 marks)

6.

(a) Work out the size of angles a and b .

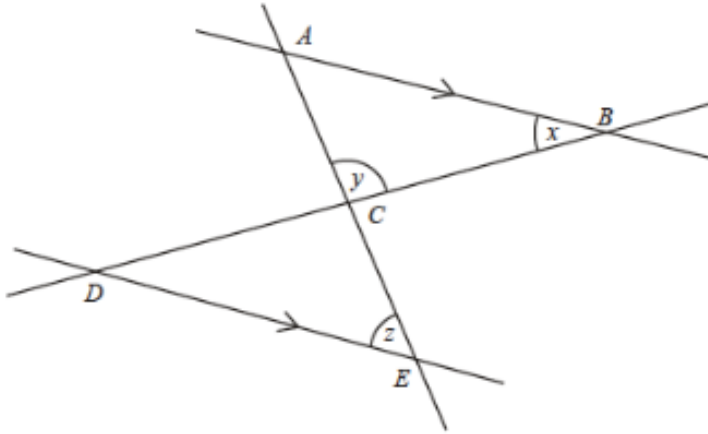


Not drawn accurately

(3)

(b) Show that $x + y + z = 180$

2 2

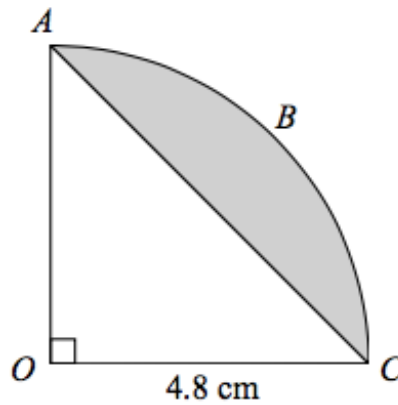


Not drawn accurately

(2)

(Total 5 marks)

7.

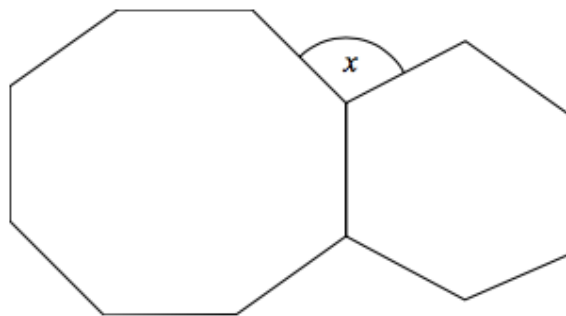


The arc ABC is a quarter of a circle with centre O and radius 4.8 cm.
 AC is a chord of the circle.

Work out the area of the shaded segment.
 Give your answer correct to 3 significant figures.

(Total 3 marks)

8.



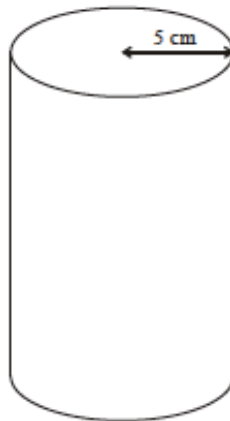
The diagram shows a regular octagon and a regular hexagon.

Find the size of the angle marked x
 You must show all your working.

(Total 3 marks)

9.

A cylinder has a radius of 5 cm.



Not to scale

(a) Calculate the circumference of a circular end of the cylinder.

(2)

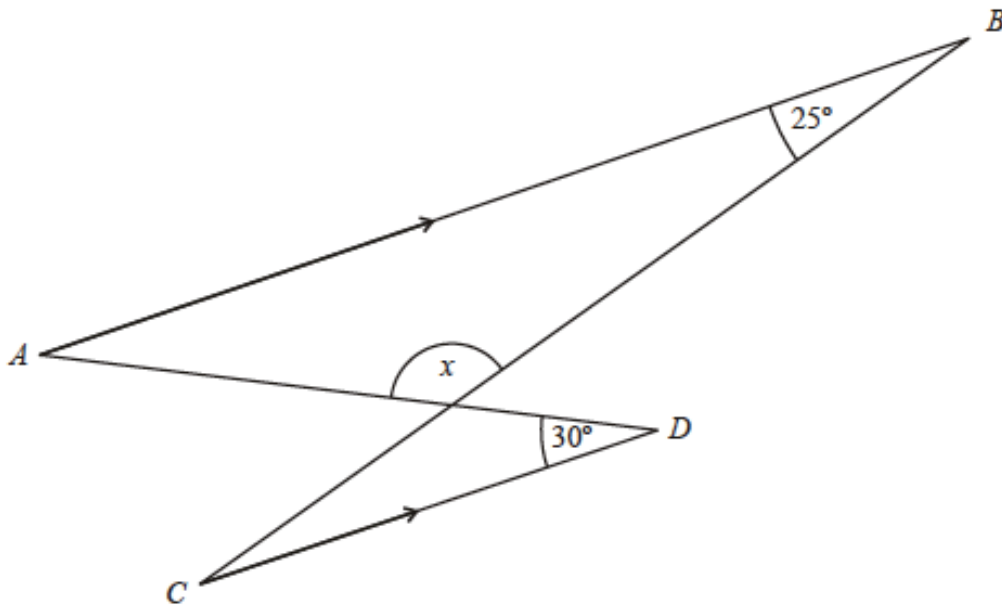
(b) The cylinder has a volume of 250 cm^3 .
Calculate the height of the cylinder.

(3)

(Total 5 marks)

10.

In the diagram AB is parallel to CD .
Work out the value of x .



Not drawn accurately

(Total 3 marks)