

Circle Problems

Difficulty: Easy

Question Paper 1

Level	IGCSE
Subject	Maths (0580/0980)
Exam Board	CIE
Topic	Mensuration
Sub-Topic	Circle Problems
Paper	Paper 2
Difficulty	Easy
Booklet	Question Paper 1

Time allowed: 37 minutes

Score: /29

Percentage: /100

Grade Boundaries:

CIE IGCSE Maths (0580)

A*	A	B	C	D	E
>88%	76%	63%	51%	40%	30%

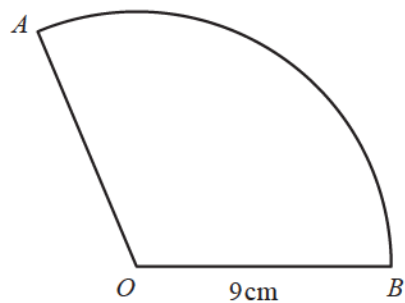
CIE IGCSE Maths (0980)

9	8	7	6	5	4	3
>94%	85%	77%	67%	57%	47%	35%

Question 1

AB is an arc of a circle, centre O , radius 9 cm .
The length of the arc AB is $6\pi\text{ cm}$.
The area of the sector AOB is $k\pi\text{ cm}^2$.

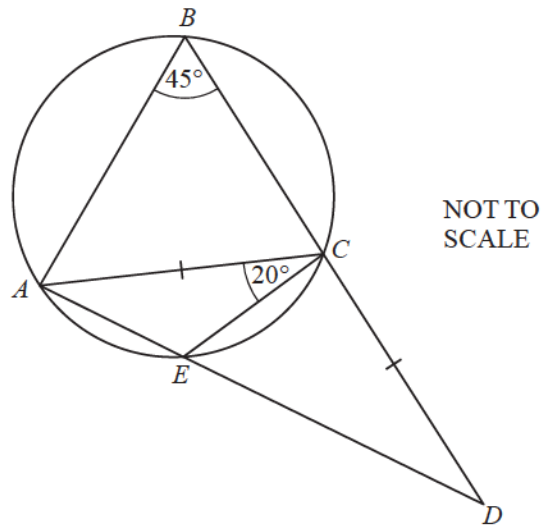
Find the value of k .



NOT TO
SCALE

[3]

Question 2

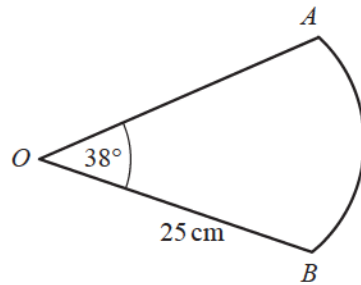


$ABCE$ is a cyclic quadrilateral.
 AED and BCD are straight lines.
 $AC = CE$, angle $ABC = 45^\circ$ and angle $ACE = 20^\circ$.

Work out angle ECD .

[3]

Question 3



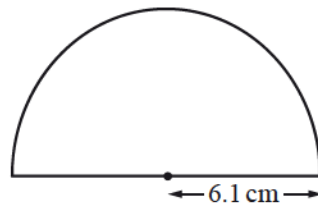
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The diagram shows a sector of a circle, centre O , radius 25 cm .
The sector angle is 38° .

Calculate the length of the arc AB .
Give your answer correct to 4 significant figures.

[3]

Question 4



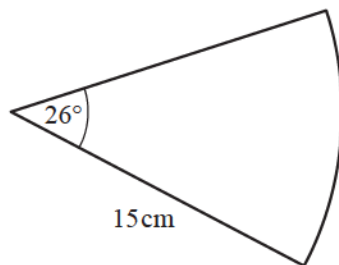
NOT TO
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A protractor is a semi-circle of radius 6.1 cm .

Calculate the **perimeter** of the protractor.

[3]

Question 5



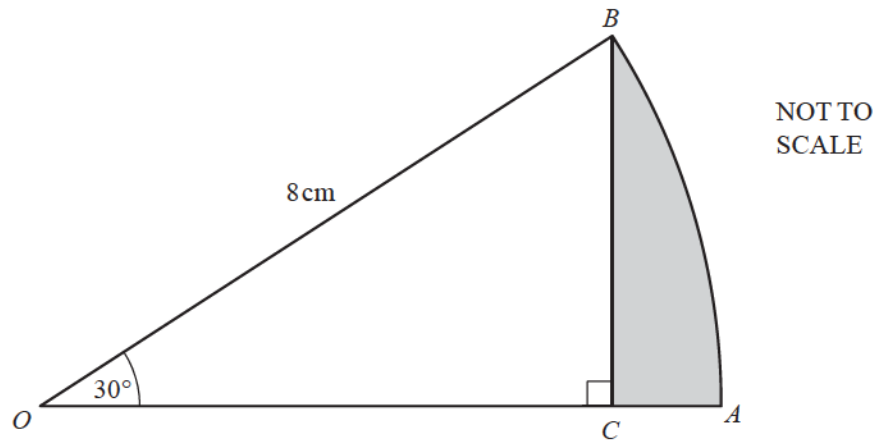
NOT TO
SCALE

The diagram shows a sector of a circle with radius 15 cm .

Calculate the perimeter of this sector.

[3]

Question 6



OAB is the sector of a circle, centre O , with radius 8 cm and sector angle 30° .
 BC is perpendicular to OA .

Calculate the area of the region shaded on the diagram.

[5]

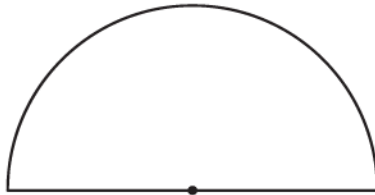
Question 7

The circumference of a circle is 30 cm

(a) Calculate the radius of the circle.

[2]

(b)

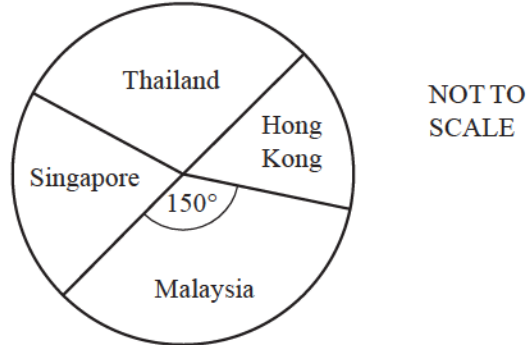


The length of the arc of the semi-circle is 15 cm.

Calculate the area of the semi-circle.

[2]

Question 8



A travel brochure has 72 holidays in four different countries.
The pie chart shows this information.

(a) There are 24 holidays in Thailand.

Show that the sector angle for Thailand is 120° .

[2]

(b) The sector angle for Malaysia is 150° .

The sector angle for Singapore is twice the sector angle for Hong Kong.

Calculate the number of holidays in Hong Kong.

[3]