

Circle Theorems

Difficulty: Easy

Question Paper 3

Level	IGCSE
Subject	Maths (0580/0980)
Exam Board	CIE
Topic	Geometry
Sub-Topic	Circle Theorems
Paper	Paper 2
Difficulty	Easy
Booklet	Question Paper 3

Time allowed: 26 minutes

Score: /20

Percentage: /100

Grade Boundaries:

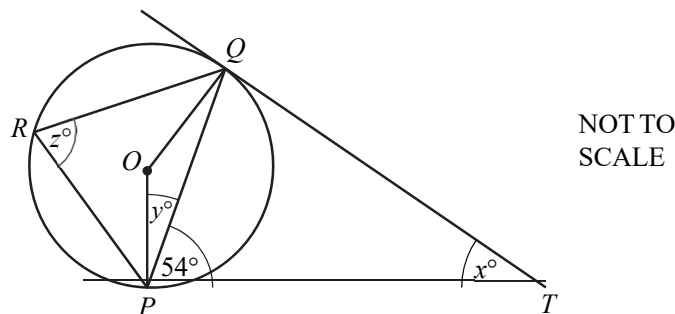
CIE IGCSE Maths (0580)

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



The points P , Q and R lie on a circle, centre O .
 TP and TQ are tangents to the circle.
 Angle $TPQ = 54^\circ$.

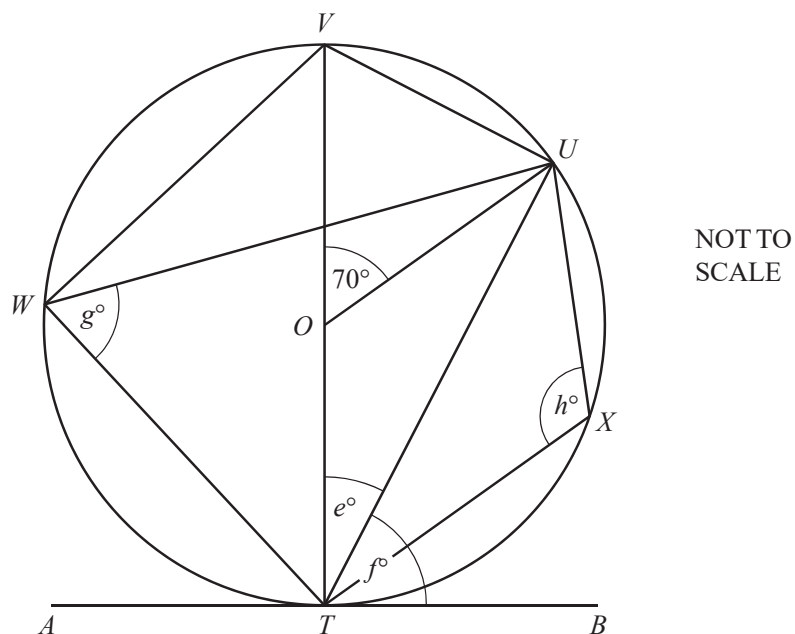
Calculate the value of

(a) x , [1]

(b) y , [1]

(c) z . [2]

Question 2

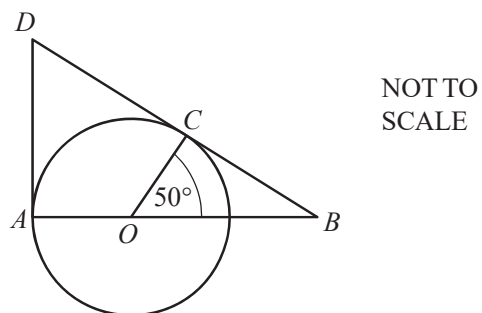


The diagram shows a circle, centre O .
 VT is a diameter and ATB is a tangent to the circle at T .
 U , V , W and X lie on the circle and angle $VOU = 70^\circ$.

Calculate the value of

- | | |
|-----------|-----|
| (a) e , | [1] |
| | |
| (b) f , | [1] |
| | |
| (c) g , | [1] |
| | |
| (d) h . | [1] |

Question 3



O is the centre of the circle.

DA is the tangent to the circle at A and DB is the tangent to the circle at C .

AOB is a straight line. Angle $COB = 50^\circ$.

Calculate

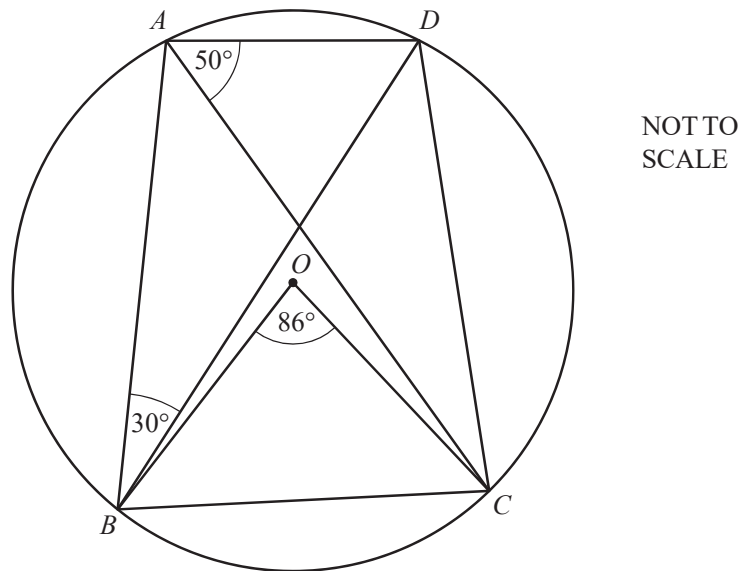
(a) angle CBO ,

[1]

(b) angle DOC .

[1]

Question 4



The points A , B , C and D lie on the circumference of the circle, centre O .

Angle $ABD = 30^\circ$, angle $CAD = 50^\circ$ and angle $BOC = 86^\circ$.

(a) Give the reason why angle $DBC = 50^\circ$.

[1]

(b) Find

(i) angle ADC ,

[1]

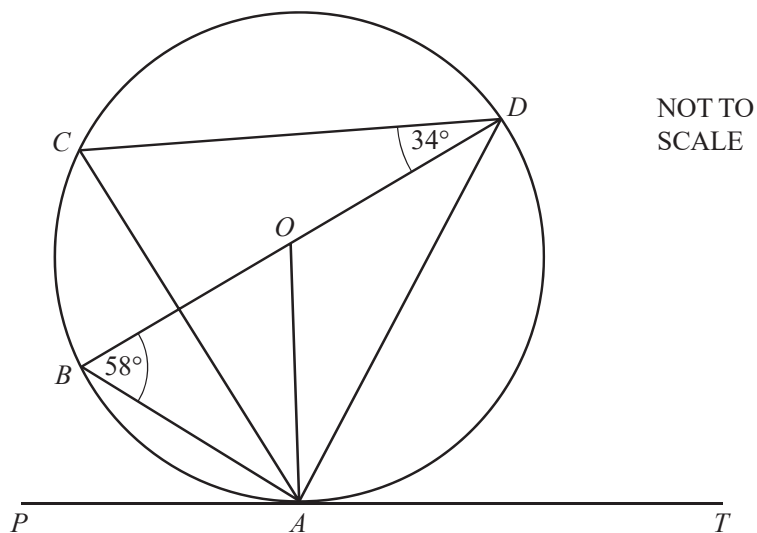
(ii) angle BDC ,

[1]

(iii) angle OBD .

[2]

Question 5



A , B , C and D lie on the circle, centre O .
 BD is a diameter and PAT is the tangent at A .
 Angle $ABD = 58^\circ$ and angle $CDB = 34^\circ$.

Find

(a) angle ACD ,

[1]

(b) angle ADB ,

[1]

(c) angle DAT ,

[1]

(d) angle CAO .

[2]