

Circle Theorems

Difficulty: Easy

Question Paper 4

Level	IGCSE
Subject	Maths (0580/0980)
Exam Board	CIE
Topic	Geometry
Sub-Topic	Circle Theorems
Paper	Paper 2
Difficulty	Easy
Booklet	Question Paper 4

Time allowed: 31 minutes

Score: /24

Percentage: /100

Grade Boundaries:

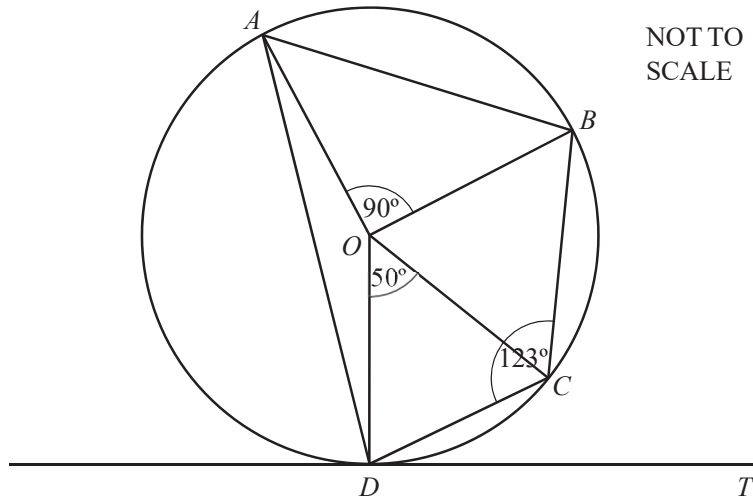
CIE IGCSE Maths (0580)

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 A, B, C and D lie on a circle centre O .
Angle $AOB = 90^\circ$, angle $COD = 50^\circ$ and angle $BCD = 123^\circ$.
The line DT is a tangent to the circle at D .

Find

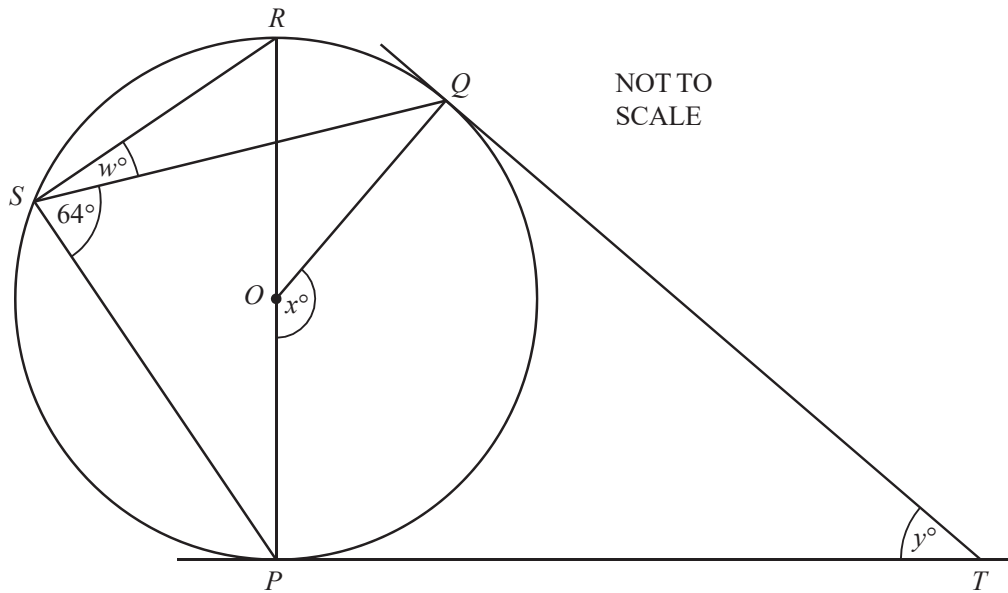
(a) angle OCD , [1]

(b) angle TDC , [1]

(c) angle ABC , [1]

(d) reflex angle AOC . [1]

Question 2



P , Q , R and S lie on a circle, centre O .
 TP and TQ are tangents to the circle.
 PR is a diameter and angle $PSQ = 64^\circ$.

(a) Work out the values of w and x .

[2]

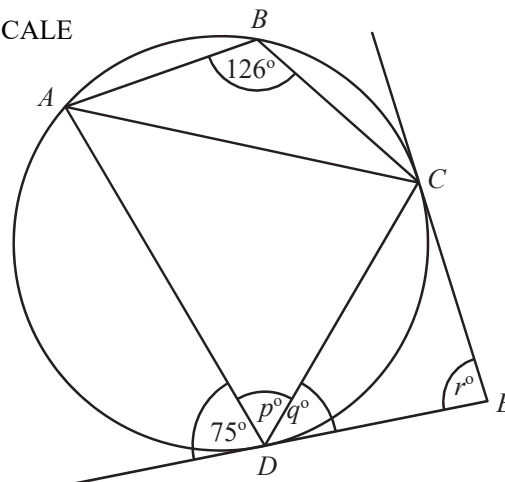
(b) Showing all your working, find the value of y .

[2]

Question 3

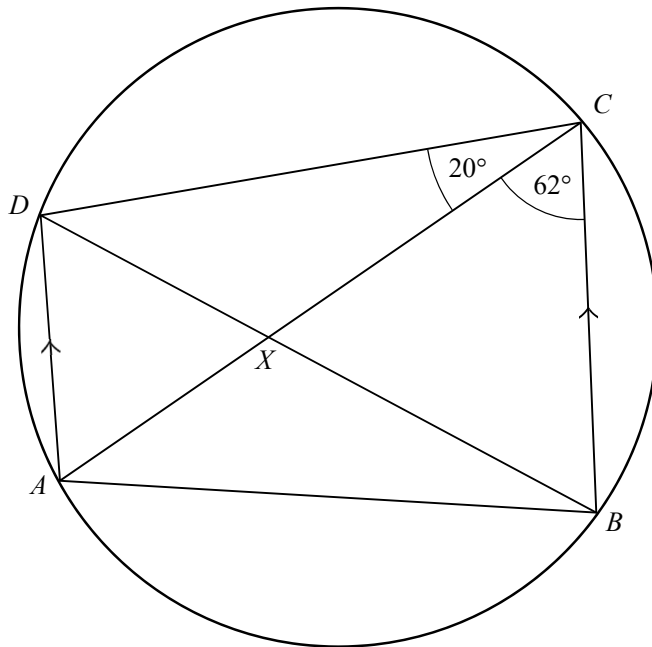
$ABCD$ is a cyclic quadrilateral.
The tangents at C and D meet at E .
Calculate the values of p , q and r .

NOT TO SCALE



[4]

Question 4



NOT TO
SCALE

$ABCD$ is a cyclic quadrilateral.

AD is parallel to BC . The diagonals DB and AC meet at X .

Angle $ACB = 62^\circ$ and angle $ACD = 20^\circ$.

Calculate

- (a) angle DBA , [1]

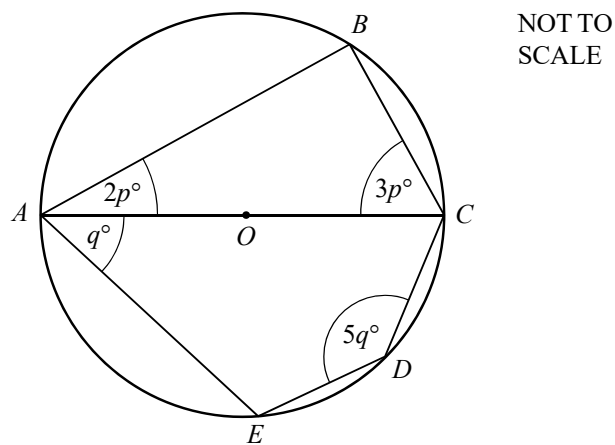
- (b) angle DAB , [1]

- (c) angle DAC , [1]

- (d) angle AXB , [1]

- (e) angle CDB . [1]

Question 5



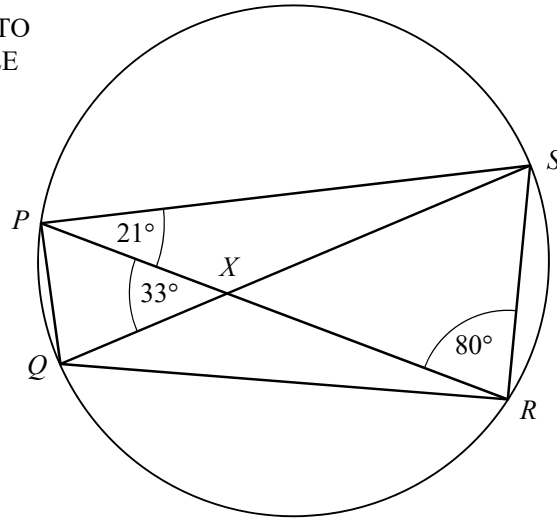
A , B , C , D and E lie on a circle, centre O . AOC is a diameter.
Find the value of

(a) p , [2]

(b) q . [2]

Question 6

NOT TO
SCALE



$PQRS$ is a cyclic quadrilateral. The diagonals PR and QS intersect at X .
Angle $SPR = 21^\circ$, angle $PRS = 80^\circ$ and angle $PXQ = 33^\circ$.
Calculate

(a) angle PQS ,

[1]

(b) angle QPR ,

[1]

(c) angle PSQ .

[1]