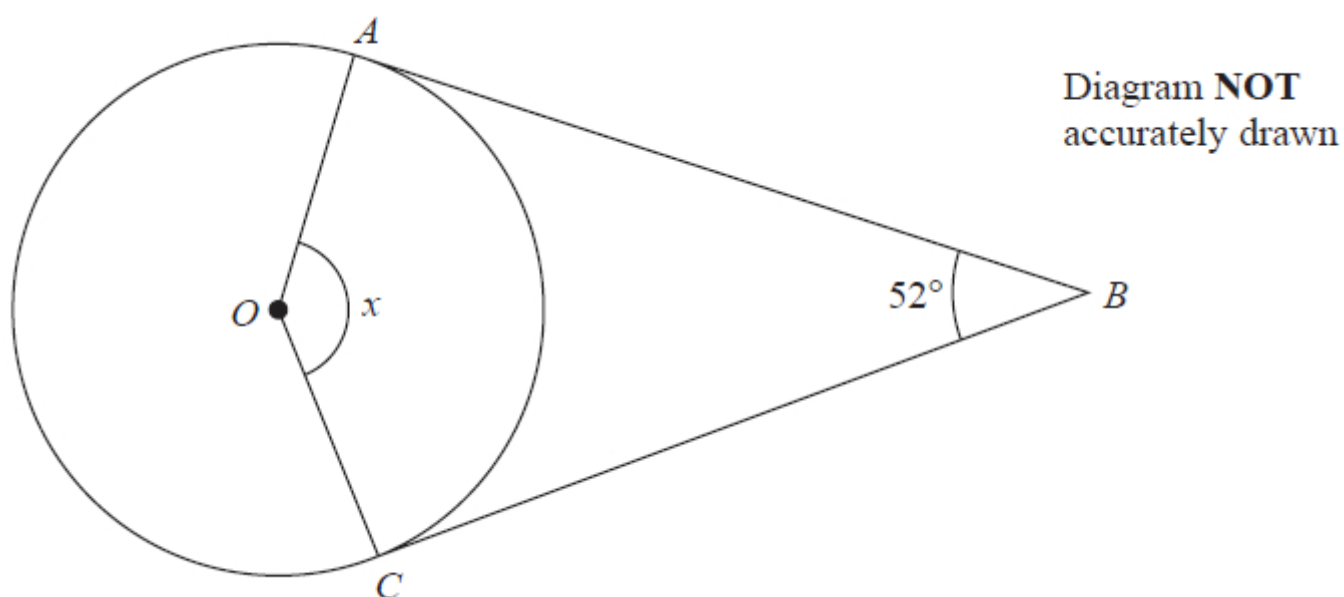




Unit 2 Revision Sheet E Circle Theorems Foundation & Higher Questions

Q1.



A and C are points on a circle, centre O .
 AB and CB are tangents to the circle.
Angle $ABC = 52^\circ$

Work out the size of angle x .
Give a reason for each stage of your working.

$x = \dots\dots\dots^\circ$

(Total for question = 4 marks)



Q2.

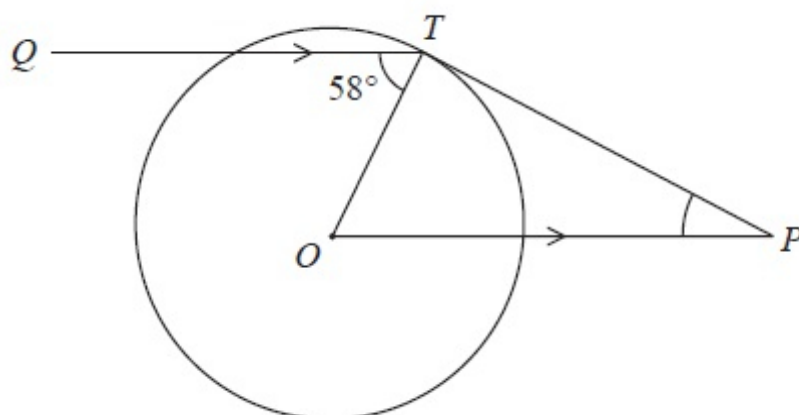


Diagram NOT
accurately drawn

T is a point on a circle, centre O .

Q is a point such that angle $QTO = 58^\circ$

P is the point such that OP is parallel to QT and PT is a tangent to the circle.

Work out the size of angle OPT .

.....°

(Total for question = 3 marks)



Q3.

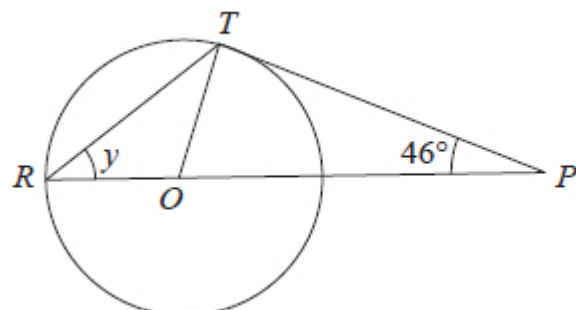


Diagram NOT
accurately drawn

R and T are points on a circle, centre O .
 ROP is a straight line.
 PT is a tangent to the circle.
Angle $TPO = 46^\circ$

(a) Explain why angle $OTP = 90^\circ$

.....
.....

(1)

(b) Work out the size of angle y .

.....
(3)

(Total for question = 4 marks)



Mark Scheme

Q1.

Q	Working	Answer	Mark	Notes
	$(x =) 360 - (90 + 90 + 52)$	128 Correct reasons	4	M1 A1 B1 B1 The angle between a tangent and a radius is 90° oe Angles in a quadrilateral add up to 360° oe
				Total 4 marks

Q2.

Question	Working	Answer	Mark	Notes
	$\angle POT = 58^\circ$		3	M1 May be stated or marked on diagram
	$\angle OTP = 90^\circ$			M1 May be stated or marked on diagram
		32		A1 cao
				Total 3 marks

Q3.

Q	Working	Answer	Mark	Notes
(a)	Angle between <u>tangent</u> and <u>radius</u> is 90°		1	B1 Accept perpendicular or right angle for 90°
(b)	angle $POT = 180 - 90 - 46 (=44)$ or $2y + 90 + 46 = 180$		3	M1 May be on diagram
	$(y =) 44 \div 2$ or $(180 - (180 - 44)) \div 2$ or $(y =) (180 - 90 - 46) \div 2$			M1
		22		A1
				Total 4 marks