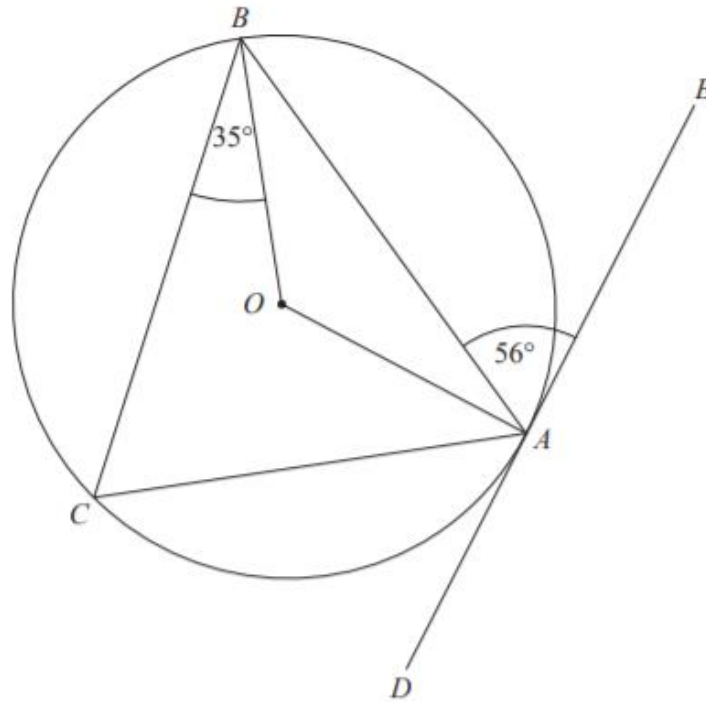


Circle Theorem Past Paper Questions GCSE Edexcel – Non Calculator

1.

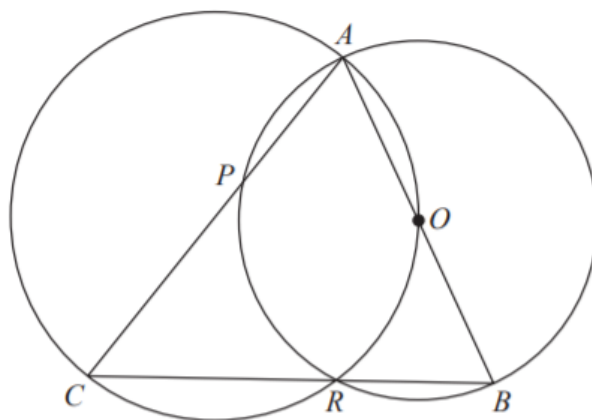


A , B and C are points on the circumference of a circle, centre O .
 DAE is the tangent to the circle at A .

Angle $BAE = 56^\circ$
 Angle $CBO = 35^\circ$

Work out the size of angle CAO .
 You must show all your working.

2.



A, B, R and P are four points on a circle with centre O .

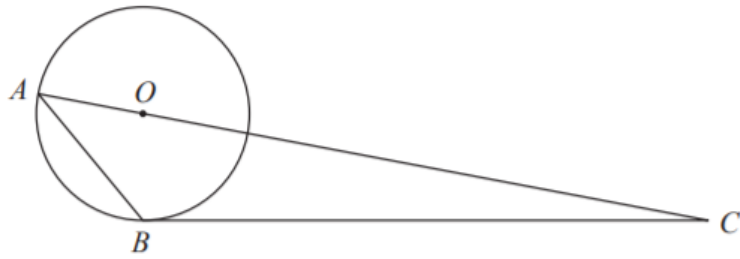
A, O, R and C are four points on a different circle.

The two circles intersect at the points A and R .

CPA, CRB and AOB are straight lines.

Prove that angle $CAB =$ angle ABC .

3.



A and B are points on a circle, centre O .

BC is a tangent to the circle.

AOC is a straight line.

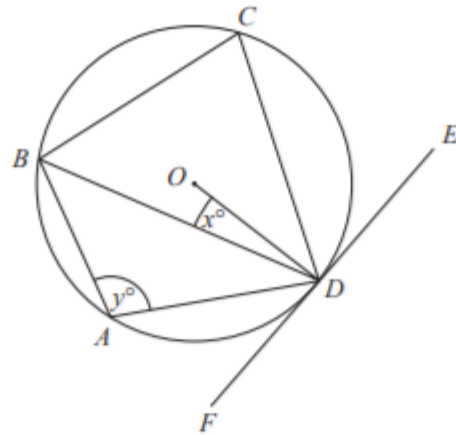
Angle $ABO = x^\circ$.

Find the size of angle ACB , in terms of x .

Give your answer in its simplest form.

Give reasons for each stage of your working.

4.



A, B, C and D are points on the circumference of a circle, centre O .
 FDE is a tangent to the circle.

- (a) Show that $y - x = 90$
 You must give a reason for each stage of your working.

(3)

Dylan was asked to give some possible values for x and y .

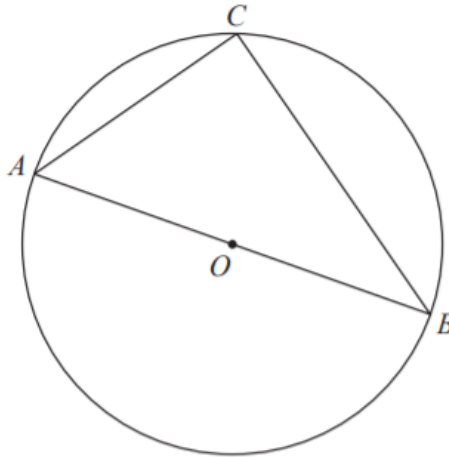
He said,

“ y could be 200 and x could be 110, because $200 - 110 = 90$ ”

- (b) Is Dylan correct?
 You must give a reason for your answer.

(1)

5.

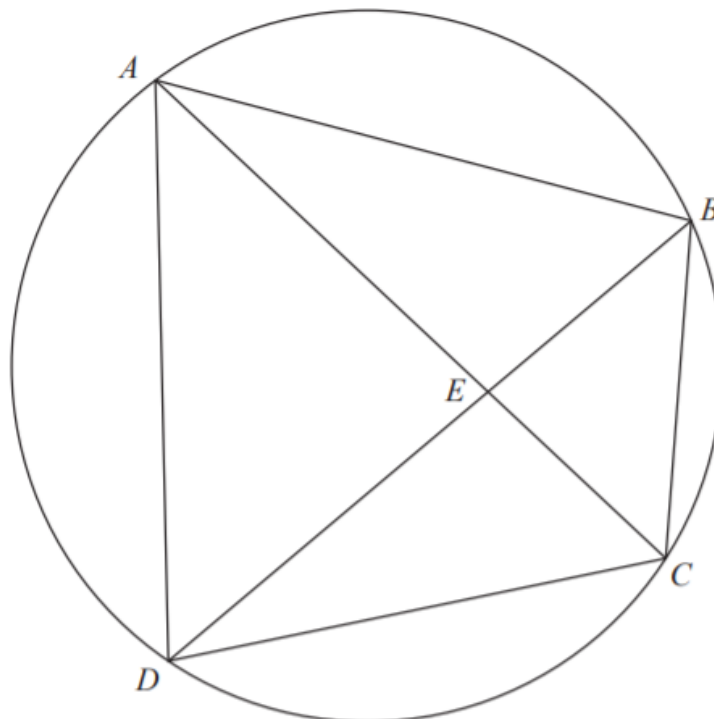


A , B and C are points on the circumference of a circle, centre O .
 AOB is a diameter of the circle.

Prove that angle ACB is 90°
You must **not** use any circle theorems in your proof.

6.

A , B , C and D are four points on the circumference of a circle.

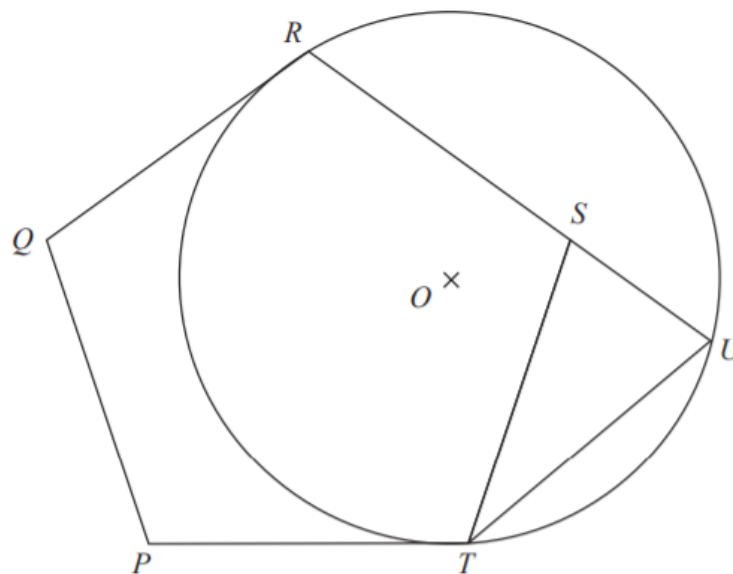


AEC and BED are straight lines.

Prove that triangle ABE and triangle DCE are similar.
You must give reasons for each stage of your working.

7.

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$PQRST$ is a regular pentagon.

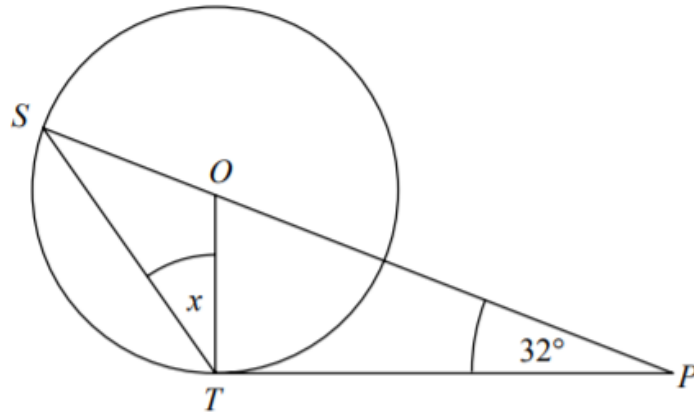
R , U and T are points on a circle, centre O .

QR and PT are tangents to the circle.

RSU is a straight line.

Prove that $ST = UT$.

8.



S and T are points on the circumference of a circle, centre O .

PT is a tangent to the circle.

SOP is a straight line.

Angle $OPT = 32^\circ$

Work out the size of the angle marked x .

You must give a reason for each stage of your working.