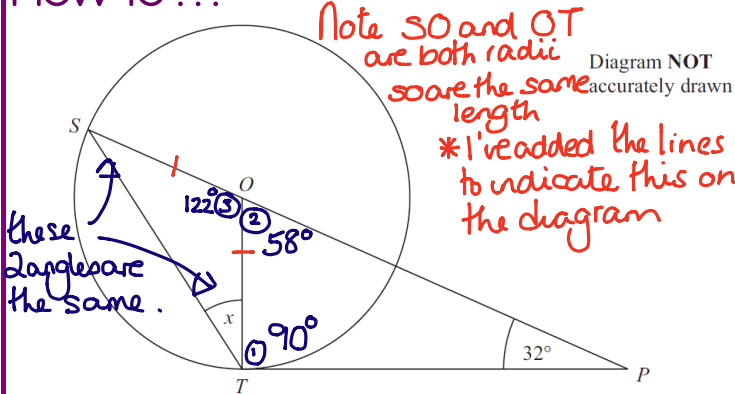


Circle Theorems

How to ...



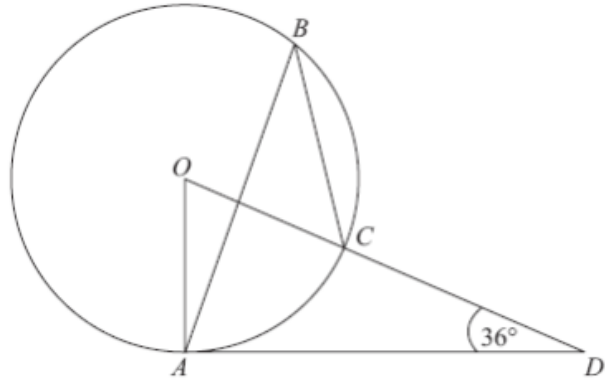
Note SO and OT are both radii so are the same length
 Diagram NOT accurately drawn
 *I've added the lines to indicate this on the diagram

these 2 angles are the same.

S and T are points on the circumference of a circle, centre O.
 PT is a tangent to the circle and SOP is a straight line.
 Angle OPT = 32°
 Work out the size of the angle marked x. Give reasons for your answer.

- ① angle $OTP = 90^\circ$ (the angle between radius and tangent = 90°)
- ② $180 - (90 + 32) = 58^\circ$ (angles in a triangle add up to 180°)
- ③ $180^\circ - 58^\circ = 122$ (angles on a straight line equal 180°)
- ④ $180^\circ - 122 = 58$ (base angles in an isosceles triangle are the same)
 $58^\circ \div 2 = 29^\circ$ $x = 29^\circ$ (5)

Now have a go yourself ...



The diagram shows a circle centre O. A, B and C are points on the circumference. DCO is a straight line. DA is a tangent to the circle.

Angle ADO = 36°

(a) Work out the size of angle AOD.

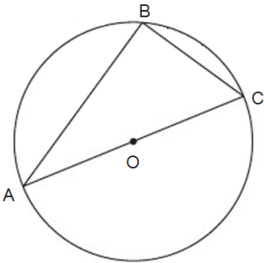
..... $^\circ$

(b) Work out the size of angle ABC.

..... $^\circ$

Give reasons for your answers.

Exam Questions



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

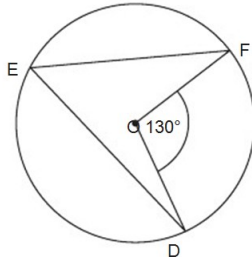
AC is a diameter of the circle.

Write down the size of angle ABC. Give a reason from your answer

D, E and F are points on the circumference of a circle, centre O.

Angle DOF = 130°

Work out the size of angle DEF. Give a reason for your answer.



Ready to be marked ?

Checklist



Answer checked



Reasons given



Keywords



Things to remember ...



What went well ...

Teacher comment ..