QT Circle Theorems
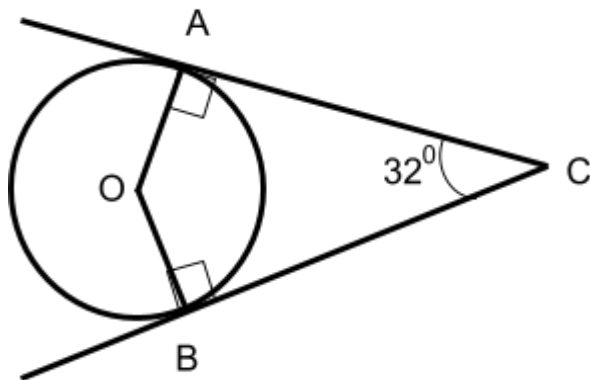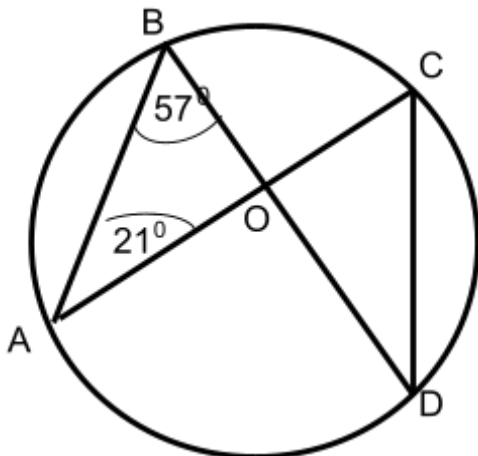
1. A and B are points on a circle, centre O.
AC and BC are tangents to the circle.
Angle ACB = 32^0
Calculate the angle AOB.
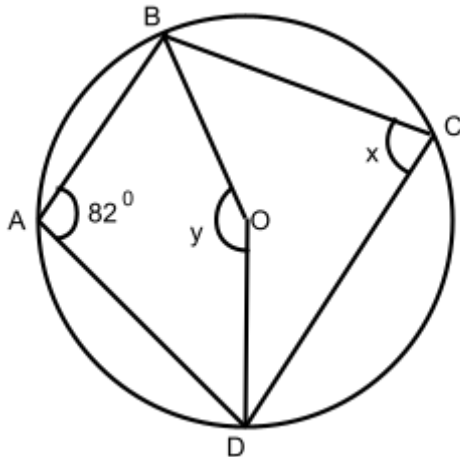You must show your working.

2. A, B, C and D are points on a circle.
Find the size of angle ACD.
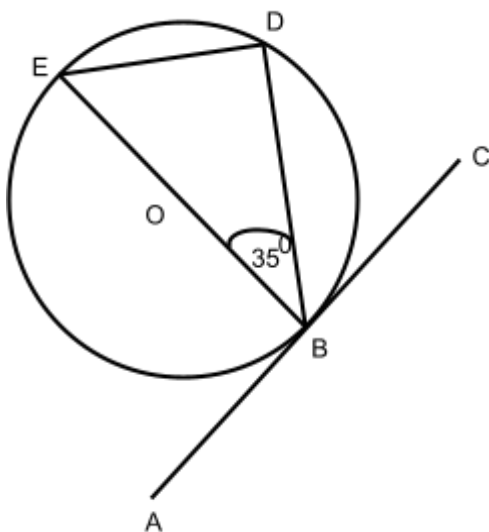Give a reason for your answer.

3. In the diagram, A, B, C and D are points on the circle centre O.
   (a) Work out the size of the angle marked x. Give a reason for your answer.
   (b) Work out the size of the angle marked y. Give a reason for your answer.

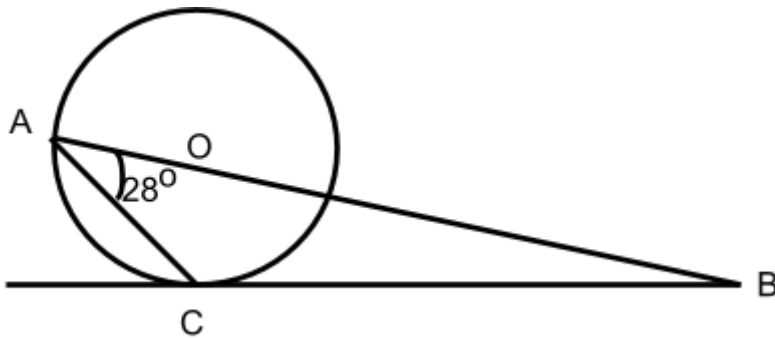4. In the diagram, B, D and E are points on the circle with centre O. ABC is a tangent to the circle. BE is the diameter of the circle.
   (a) Work out the size of angle ABD. Give a reason for your answer.
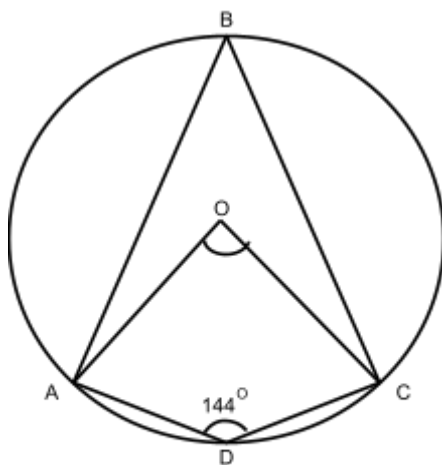   (b) Work out the size of angle DEB. Give a reason for your answer.

5. A and C are points on the circumference of a circle, centre O.
BC is a tangent to the circle. Angle BAC = 28^0
Find the size of angle ABC.
You must show all your working.

6. A, B, C and D are points on the circumference of a circle, centre O.
Angle ADC = 144°
Work out angle AOC.
You must show your working, and give a reason for each stage of your working.

7. A, B and C are points on the circumference of a circle centre O. The line DCE is a tangent to the circle. AB = BC.
Work out the size of the angle OCB.
Give reasons for your answer.