

**19th October**

Corbettmaths

A circle has equation  
 $(x - 7)^2 + (y + 3)^2 = 36$

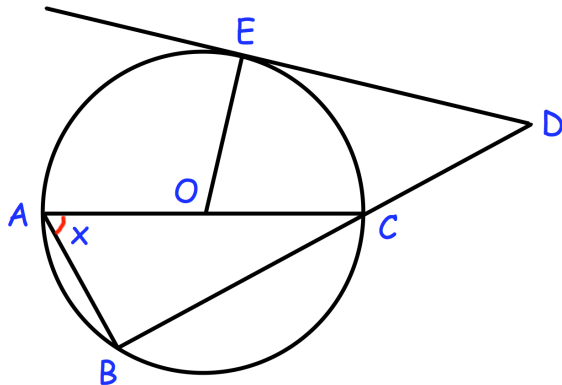
State, with a reason, whether this circle intersects the x-axis

Expand and simplify

$$(1 + x)^5$$

$$f(x) = \sin x \quad \text{for } 90^\circ \leq x \leq 120^\circ$$

Work out the range of  $f(x)$



AC is the diameter of a circle, centre O.  
 DE is the tangent to the circle.  
 BCD is a straight line.  
 $AO = CD$   
 Angle  $BAC = x$

Express angle COD in terms of  $x$ .