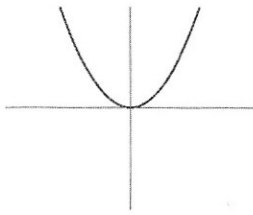
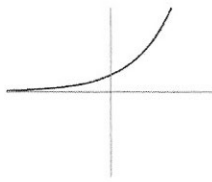




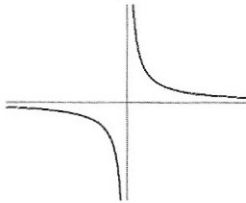
Graph A



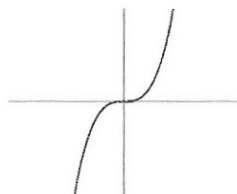
Graph B



Graph C



Graph D



$y = x^2$ is graph A

$y = x^3$ is graph **D**

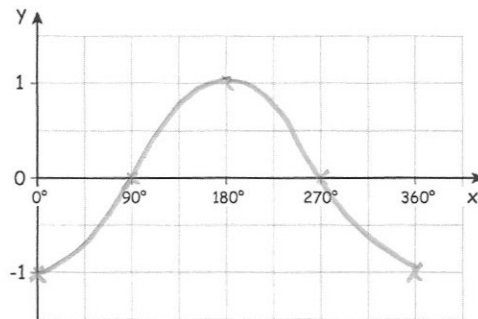
$y = 2^x$ is graph **B**

$y = \frac{1}{x}$ is graph **C**

For all the values of x

$f(x) = x - 180$ $\cos(x - 180)$
 $g(x) = \cos x$

Draw the graph of the function $y = gf(x)$ for $0^\circ \leq x \leq 360^\circ$

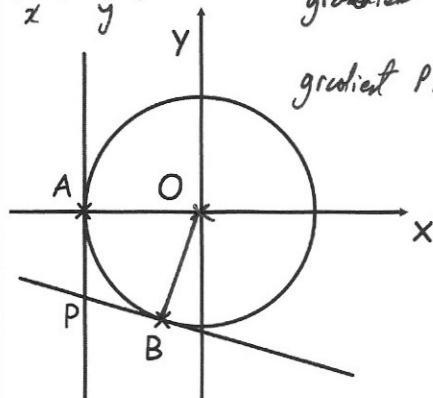


The circle $x^2 + y^2 = 289$ has $r = 17$ tangents at points A and B.

The point A has coordinates $(-17, 0)$

The point B has coordinates

$(-8, -15)$



The tangents meet at the point P.

Work out the equation of the tangent at B.

$y = -\frac{8}{15}x + c$

$-15 = \frac{64}{15} + c$ $c = -\frac{289}{15}$

$y = -\frac{8}{15}x - \frac{289}{15}$

Work out the coordinates of the point P.

$-17 = x$ $x = -17$

$y = -\frac{8}{15}(-17) - \frac{289}{15} = -10.2$

$(-17, -10.2)$