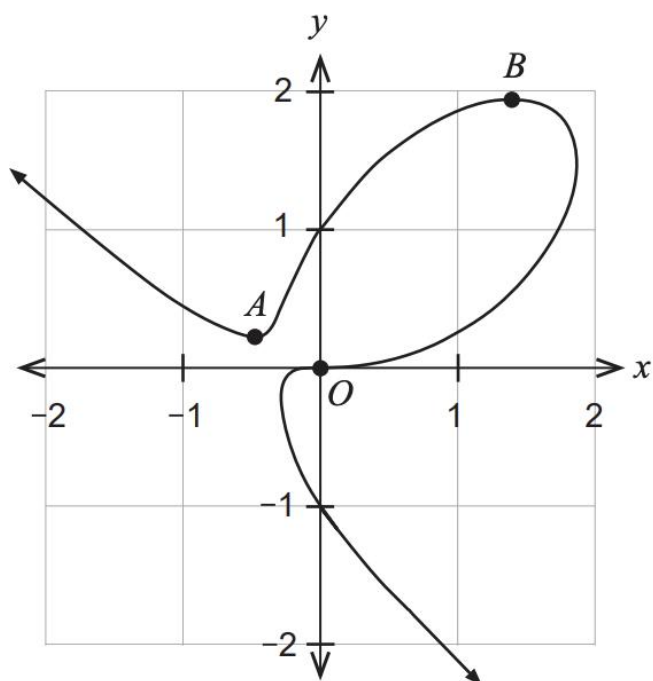


Question 18**(6 marks)**

The equation $x^3 + y^3 = 3xy + y$ implicitly defines the curve shown below.



- (a) Using implicit differentiation obtain the expression for $\frac{dy}{dx}$. (3 marks)

The slope of the curve at the origin O and points A and B is equal to zero.

- (b) Show that the equation that determines the x coordinates for points A and B is given by $x^4 - 2x - 1 = 0$ and hence determine the coordinates for point A correct to 0.001.
(3 marks)