<u>AQA – Differentiation – A2 Mathematics P3</u>

1. June/2019/Paper_3/No.9

A curve has equation

$$x^2y^2 + xy^4 = 12$$

Prove that the curve does not intersect the coordinate axes.	[2 marks]
Show that $\frac{dy}{dx} = -\frac{2xy + y^3}{2x^2 + 4xy^2}$	
απ 2π 4πy	[5 marks
	Show that $\frac{dy}{dx} = -\frac{2xy + y^3}{2x^2 + 4xy^2}$

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(b) (ii)	Prove that the curve has no stationary points.	[4 marks]
(b) (iii)	In the case when $x>0$, find the equation of the tangent to the curve when	y = 1 [4 marks]