

12	(a)	$6x^2 + 3y^2 \frac{dy}{dx} = 5 \frac{dy}{dx} \left[ \Rightarrow \frac{dy}{dx} = \frac{6x^2}{5 - 3y^2} \right]$ <p>when <math>x = 1, y = 2, 6 + 12 \frac{dy}{dx} = 5 \frac{dy}{dx}</math></p> $\Rightarrow \frac{dy}{dx} = -\frac{6}{7}$	<b>M1</b> <b>A1</b>  <b>M1</b>  <b>A1</b>  <b>[4]</b>	<b>1.1a</b> <b>1.1</b>  <b>1.1</b>  <b>2.1</b>	implicit differentiation correct  substituting $x = 1, y = 2$  cao	
12	(b)	$\frac{dy}{dx} = 0 \text{ so } 6x^2 = 0$ <p><math>x = 0</math> so all stationary points lie on <math>y</math>-axis</p>	<b>B1</b>   <b>E1</b> <b>[2]</b>	<b>1.2</b>   <b>2.1</b>	Substitute $\frac{dy}{dx} = 0$ into their differentiated expression Completion of argument	