

Question	Answer	Marks	Guidance
	Use product rule to differentiate x^2y	*M1	There must be evidence of implicit differentiation
	Obtain correct $2xy + x^2 \frac{dy}{dx}$	A1	
	Obtain $\left[2xy + x^2 \frac{dy}{dx} + \right] 6y^2 \frac{dy}{dx} = 0$	*B1	
	Substitute $x = 4, y = 2$ to find value of $\frac{dy}{dx}$	DM1	dependent on at least one term involving $\frac{dy}{dx}$
	Obtain $-\frac{2}{5}$	A1	SOI, OE
	Attempt equation of normal passing through $(4, 2)$	M1	with numerical gradient correctly obtained from the negative reciprocal of <i>their</i> derivative
	Obtain $5x - 2y - 16 = 0$	A1	
		7	

