

3 Given that  $y = e^{2x}(x^2 + 1)$

(a) find  $\frac{dy}{dx}$  (3)

The straight line  $l$  is the tangent to the curve with equation  $y = e^{2x}(x^2 + 1)$  at the point on the curve where  $x = 0$

(b) Find an equation for  $l$  in the form  $y = mx + c$  (3)

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**Question 3 continued**

Handwriting practice area with horizontal dotted lines.

**(Total for Question 3 is 6 marks)**

