14 (a) Given that $a = 3^x$ and $b = 3^y$

express in terms of a or b or a and b,

(i) 3^{2x}

(ii) 3^{x+4y}

(iii) 3^{y-1}

(3)

$a = 3^x$ and $b = 3^y$

$ab = 2187$

$a^2b = 177\,147$

(b) Work out the value of x and the value of y.
Show your working clearly.

$x =$

$y =$

(3)

(Total for Question 14 is 6 marks)

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