

3 (a) Write down the value of  $\log_3 9$

(1)

(b) Solve the equation  $\log_3 9t = \log_9 \left( \frac{12}{t} \right)^2 + 2$  where  $t > 0$

Give your answer in the form  $a\sqrt{b}$  where  $a$  and  $b$  are prime numbers.

(6)

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**Question 3 continued**

Handwriting practice area with horizontal dotted lines.

**(Total for Question 3 is 7 marks)**

