

- 2 (a) Show that the equation $\log_4(2x+1) = 2\log_4(3x-1) - 2$ can be written as a quadratic equation in x . [3]

This image shows a full page of white paper with horizontal dashed lines, typical of primary school writing paper. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

- (b)** Hence solve the equation $\log_4(2x+1) = 2\log_4(3x-1) - 2$. [2]

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- 2** It is given that $2 \ln p + \ln(p-1) - \frac{1}{2} \ln(q+1) = 3$.

Find q in terms of p .

[3]

[illegible]

1 Solve the equation $\frac{e^{x+2e}}{e^x-3} = 4$. Give your answer correct to 3 decimal places. [5]

[5]

③