1. Nov/2022/Paper_9709_21/No.2

Use logarithms to solve the equation $14e^{-2x} = 5^{x+1}$, giving your answer correct to 3 significant figures. [4]

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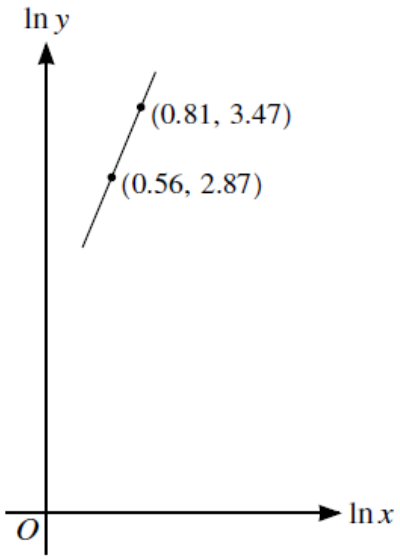
2. Nov/2022/Paper_9709_22/No.3



The variables x and y satisfy the equation $y = Ax^k$, where A and k are constants. The graph of $\ln y$ against $\ln x$ is a straight line passing through the points (0.56, 2.87) and (0.81, 3.47), as shown in the diagram.

Find the value of k, and the value of A correct to 2 significant figures. [5]

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