6 Variables x and y are such that when $\ln y$ is plotted against x a straight-line graph is obtained. The line passes through the points $(1, \ln 15)$ and $(2, \ln 75)$.

Show that $y = Ab^x$ where A and b are integers to be found. [4]

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7 Show that the curve $y = x - \ln(x^2 + 2x)$ has exactly one stationary point.

Find the x-coordinate of this point. [6]

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