

Precalculus

Exponent equation that reduces to quadratic, natural base

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Example

Solve the equation

$$e^{2x} - 3e^x - 4 = 0$$

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Set $e^x = u$.

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Set $e^x = u$. Then $e^{2x} = ?$.

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Set $e^x = u$. Then $e^{2x} = u^2$.

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$$(\text{?} \quad) (\text{?} \quad) = 0$$

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or

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$$x \approx 1.3863$$