

Exponential and Log Functions

ECON 441: Introduction to Mathematical Economics

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- Derivative of the exponential function:

$$\frac{dy}{dt} e^t = e^t$$

- Derivative of the log function:

$$\frac{d}{dt} \ln t = \frac{1}{t}$$

Find the derivatives for the following functions:

1. $y = e^t$

2. $y = \ln t$

3. $y = ae^{rt}$

4. $y = e^{-t}$

5. $y = \ln at$

6. $y = \ln t^c$