

Calculus 120, Chapter 4 Summary ~ things you should know

notes by Tim Pilachowski

Important concepts:

exponent properties (exponent rules)

Euler's number, e

the natural exponential function, $y = e^x$

the natural logarithm function, $y = \ln x$

logarithm properties

Be able to:

use exponent properties to simplify and solve exponentials.

sketch simple exponential functions.

find the derivative of functions involving e^x .

solve differential equations of the form $y' = ky$.

solve equations involving exponentials and logarithms.

rewrite an exponential in any base as an exponential base e .

find the derivative of a function involving $\ln x$.

simplify and expand logarithms using logarithm properties

find the derivative of the logarithm of a product or quotient

find a derivative using logarithmic differentiation

Review exercises from the text (13th edition):

Chapter 4 Review of Fundamental Concepts, 1 – 14

Chapter 4 Supplementary Exercises, 1 – 98 (answers to odd-numbered problems are in the back)