Calculus 130, Chapter 2 Summary ~ things you should know

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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

exponential growth and decay model $y = y_0 e^{kt}$

recognizing variables as used in a given formula

angles measured in radians

sine , cosine, tangent, secant, cosecant and cotangent functions and their definitions

Be able to:

use exponent properties to simplify and solve exponentials.

sketch simple exponential and logarithm functions using shifts and translations.

solve equations involving exponentials and logarithms.

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

simplify and expand logarithms using logarithm properties.

solve word problems involving $y = y_0 e^{kt}$, including but not necessarily limited to solving for y, y_0, k or t, as well as formulating an equation from given information.

identify and construct angles measured in radians.

find the value of sin t, cos t, tan t and sec t in a triangle, or from coordinates of a point, or using symmetry and values for known angles in Quadrant I.

identify the amplitude and period of various sine and cosine functions, along with the values of maximum and minimum points.

Review exercises from the text:

Chapter 2 Review Exercises (answers to odd-numbered problems are in the back)

1 – 45, 53 – 74, 87, 89, 94, 95, 97