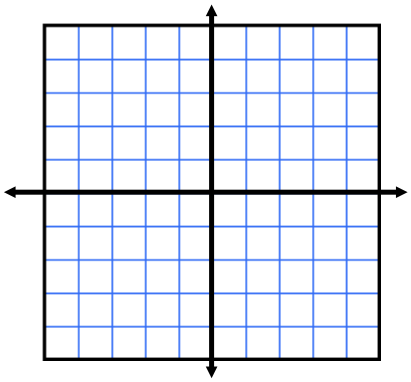
Calculus AB

5-4

The Exponential Function

The Exponential Function -



domain:

range:

asymptotes:

The Derivative of the Exponential Function -

The Integral of the Exponential Function -

Solve for x to three decimal places. (pg 358)

2) $e^{\ln 2x} = 12$

4) $4e^{x} = 83$

12) $\ln x^2 = 10$

Find the derivative of each function.

40) $y = e^{-5x}$

54) $y = \dfrac{e^{x} - e^{-x}}{2}$

Find the extrema and the points of inflection of the function.

84) $f(x) = x \cdot e^{-x}$

Day 1 - Assignment:
Pg. 358
1-15 odd,
39-75 odd,
79-85 odd.

Find or evaluate the integral. (pg 360)

old book 91) $\int xe^{-x^2}dx$

110) $\int \frac{e^x - e^{-x}}{e^x + e^{-x}}\,dx$

Solve the differential equation.

128) $\frac{dy}{dx} = (e^x - e^{-x})^2$

Day 2 - Assignment
Pg. 360
99 - 135 odd