Learning objectives for test 3

1. Solve optimization problems.
2. Apply the product rule, quotient rule, and chain rule to find the derivatives of products, quotients, and compositions of functions respectively.
3. Given the values of quantities and their rates of change at some particular time, find the rate of change of a quantity which can be expressed as the product or composition of functions representing the given quantities.
4. Use laws of exponents and logarithms to solve exponential equations.
5. Differentiate exponential functions and functions that are sums, products, quotients, compositions, etc. of exponential functions.
6. Differentiate logarithmic functions and functions that are sums, products, quotients, compositions, etc. of logarithmic functions.
7. Use exponential functions and the above methods to solve problems involving exponential growth and decay.