Standard D3: Finding Basic Derivatives (rev20181101)
(focusing on analytical "symbolic" methods)
(Textbook 2.3 and 3.1, 3.2, 3.3, 3.5, 3.6. 2017-2018 Standards 6, 9)
NO calculator on content assessment.

1. Understand that the derivative of a function is defined as the limit of a difference quotient and can be determined using a variety of strategies. [EU 2.1]

2. Be able to calculate derivatives. [LO 2.1C]

a. Using the Definition: Know that direct application of the definition of the derivative can be used to find the derivative for selected functions, including polynomial, power, sine, cosine, exponential, and logarithmic functions. [EK 2.1C1]

b. Using Derivative Rules: Know that specific rules can be used to calculate derivatives for classes of functions, including polynomial, rational, power, exponential, logarithmic, trigonometric, and inverse trigonometric. [EK 2.1C2] Know that sums, differences, products, and quotients of functions can be differentiated using derivative rules. [EK 2.1C3]

1) Derivative of Constant Functions (Textbook 2.3, page 94)
2) Derivative of Linear Functions (Textbook 2.3, page 94)
3) Derivative of Power Functions (Textbook 2.3) & "Power Rule" (3.1)
4) Derivative of a Constant Multiple of a Function (Textbook 3.1, page 124)
5) Derivative of a Sum or Difference of Two Functions (Textbook 3.1, page 125)
6) Derivative of Polynomial Functions (3.1, page 127)
7) Derivative of Exponential Functions (3.2, pages 133-134)
8) Derivative of Logarithmic Functions (3.6)
9) Derivative of Trigonometric Functions (3.5)
10) "Product Rule" (3.3, page 137)
11) "Quotient Rule" (3.3, page 138)