**Materials**:

 Textbook: Calculus of a Single Variable 9th Edition by Larson, Edwards

 Notes: Notebook or 3 ring binder with loose-leaf paper, handouts,

 Graphing calculator, pencils, highlighters, etc.

**Essential Question:**

What is a derivative?

**Rationale**:

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| --- | --- | --- |
| **Letter Day and Date** | **Section and Objectives** | **Note Pages and Assignment** |
|  | Find an equation of the derivative of a function as a limit of the difference quotientSection 2-1 | Notes pg 1-5Homework packet # 1-10 |
|  | Estimate the value of the derivative of a function at a point graphically and numerically and use the value of the derivative to find an equation of a tangent line drawn to the graph of a functionSection 2-1 | Notes pg 6-9Homework packet # 11- 27 |
|  | Analytically find the derivative of a polynomial, sine, or cosine function, and use it to find the equation of a tangent line. Section 2-2 | Notes pg 10-14Homework packet #28-48Study for quiz |
|  | Analytically find the first derivative of a polynomial, sine, or cosine function and use it to find intervals of increasing, decreasing, and relative maximums/minimums for the graph of the function. Section 3-1 and 3-3 | Notes pg 15-20Homework packet #49-56 |
|  | Solidify the concept of the derivative being the tangent line and learn to approximate the value of a function using the equation of the tangent line. Review Session | Notes pg 21 - 25Homework packet # 57-74 |
|  | Quiz # 1 |   |
|  | Non Calculator Test |  |
|  | Calculator test | Lap 1 Homework Packet is dues – 50 points |

**Independent activities:**

Due\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_