



AP Calculus AB

1st Grading Period (10 days)

Power Objective:

- Use maximization and minimization processes to solve word problems in a real world context. (P.O. #9)

Academic Vocabulary:

- absolute extrema
- local extrema
- The Extreme Value Theorem
- The Mean Value Theorem
- concavity
- First Derivative Test
- Second Derivative Test
- Horizontal Asymptotes

Applications of Differentiation

Enduring Understandings:

- The process of differentiation allows us to fully analyze the shape of a curve.
- One can analyze changing rates by looking at other rates that are changing within the model.

Essential Questions:

- What does it mean to a rate of change if a function is concave up/down?
- How do you know if you have a maximum/minimum by referencing the first derivative.
- What does an inflection point indicate in real life?