Test 2 Outline

2.5  – Using chain rule
      – Chain rule in combination with other rules

2.6  – Evaluating implicit derivatives
      – Finding rates of change using implicit derivatives

2.9  – Finding linearizations
      – Using linearizations to approximate function values
      – Finding differentials
      – Using differentials to approximate change in function values

3.1  – Process for finding absolute extremes on closed intervals
      – Finding critical numbers
      – Absolute extremes vs. local extremes

3.2  – Rolle’s Theorem/Mean Value Theorem
      – Using Mean Value Theorem in applications

3.3  – Understand what $f'$ and $f''$ say about the shape of $f$
      – Increasing/decreasing test
      – Determining if critical numbers correspond to local extremes (1st Derivative and 2nd Derivative Tests)
      – Concavity test
      – Finding inflection points

3.4  – Evaluating limits at infinity
      – Memorize infinite limit laws
      – Finding horizontal asymptotes

3.5  – Graphing functions from data about $f'$ and $f''$