THINGS TO KNOW FOR EXAM 3

- L'Hospital's rule.
- Indeterminate forms: $\frac{0}{0}$, $\frac{\infty}{\infty}$, $\infty \cdot 0$, $\infty - \infty$, 0^0, ∞^0, 1^∞.
- Guidelines for graphing
  (1) Domain
  (2) Intercepts
  (3) Symmetry
  (4) Asymptotes
  (5) Intervals of Increase/Decrease
  (6) Concavity and points of inflection
  (7) Sketch the curve
- Optimization problems
- Newton's method: $x_{i+1} = x_i - \frac{f(x_i)}{f'(x_i)}$.
- Linear approximation: $y = f(a) + f'(a)(x - a)$ is a good approximation for $f(x)$ "near" a.
- Antiderivatives: Memorize the table on page 345.
- Summation Notation
- Know the rules for summations on page A35.
- Memorize Theorem 3 (page A37).