Final Exam Review Sheet

Study previous review sheets, homework problems, quizzes, and exams (solutions are posted on the course webpage) in addition to the suggested problems below.

Section 5.2

- Increasing and decreasing functions
- First derivative test for monotonicity on p. 263
- Second derivative test for concavity on p. 267
- p. 270 # 7, 9, 15, 19, 21

Section 5.3

- First derivative and second derivative test for extrema on p. 275 - 277
  - p. 287 # 4, 6, 11, 13, 15
- Inflection points (p. 287 # 19, 21, 23)
- Horizontal and vertical asymptotes
- Graph sketching (p. 287 # 29, 30, 33, 34, 35, 36, 37)

Section 5.4

- Optimization (p. 296 # 5, 9, 11, 15, 17)

Section 5.5

- L'Hospital's Rule on p. 300
  - p. 307 # 11, 13, 15, 17, 19, 21, 29, 32, 39, 43, 47, 49, 51

Section 5.7

- Newton's Method $x_{n+1} = x_n - \dfrac{f(x_n)}{f'(x_n)}, \quad n = 0,1,2,...$
  - p. 324 # 3, 5, 7, 9

Section 5.8

- Antiderivatives
  - Table 5.1 on p. 328
  - p. 330 # 3, 7, 11, 17, 21, 23, 29, 31, 33
- Initial value problems
  - p. 331 # 37, 40, 43, 45, 49, 51, 55, 57, 61
- Falling objects (p. 329, Example 6)
  - p. 331 # 65