

Final Exam Review

1. CHAPTER 1

Be sure to know all the vocabulary from the sections we covered from this chapter. There will not be any questions specifically from this chapter, but many of the basics from this chapter are used throughout the other chapters.

2. CHAPTER 2

- (1) Be able to evaluate limits by analyzing graphs.
- (2) Be able to evaluate one-sided and two-sided limits algebraically.
- (3) Be able to evaluate limits at infinity (end behavior).

3. CHAPTER 3 AND CHAPTER 4

- (1) Be able to identify tangent lines using the derivative.
- (2) Be able to evaluate derivatives of basic functions (polynomials, e^x , $\ln x$, $\sin x$, $\cos x$, $\tan x$).
- (3) Be able to evaluate derivatives using the product, quotient, and chain rules.
- (4) Be able to do a related rates problem.

4. CHAPTER 5 AND CHAPTER 6

- (1) Be able to solve Absolute Max/Min problems with closed intervals $[a, b]$ or infinite intervals like $[a, \infty)$ or $(-\infty, b]$.
- (2) Be able to set up and solve Applied Max/Min problems which will be asked as multi-part questions.
- (3) Be able to analyze the motion of a particle moving in rectilinear motion.
- (4) Be able to evaluate basic definite and indefinite integrals.
- (5) Be able to evaluate definite and indefinite integrals with substitutions.
- (6) Be able to interpret the meaning of definite integrals with respect to area and rectilinear motion problems.