MA 141 Reading Assignment 24–Sec 4.5

(1) What does the term *indeterminate form* mean?

(2) Describe the indeterminate form of type $\frac{0}{0}$.

(3) Describe the indeterminate form of type $\frac{\infty}{\infty}$.

(4) State L'Hospital's rule.

(5) Is L'Hospital's rule valid for one-sided limits and limits at infinity?

(6) Describe the indeterminate form of type $0 \cdot \infty$.

(7) Describe how to convert this form to use L'Hospital's rule.

(8) Describe the indeterminate form of type $\infty - \infty$.

(9) Describe how to convert this form to use L'Hospital's rule.

(10) Describe the indeterminate form of type 0^0.

(11) Describe the indeterminate form of type ∞^0.

(12) Describe the indeterminate form of type 1^∞.

(13) How do we solve these types of limits?

MA 141 Reading Assignment 25–Sec 4.6

(1) State the steps involved in solving optimization problems.

(2) State the first derivative test for absolute extreme values.

(3) Choose one of the examples and explain the problem and solution in your own words.

MA 141 Reading Assignment 26–Sec 4.8

(1) What is Newton's method? Why do we use it?

(2) Describe how Newton's method works either generally or illustrating with an example.

MA 141 Reading Assignment 27–Sec 4.9

(1) Define the antiderivative of a function f.

(2) Explain in your own words the idea of an antiderivative.

(3) State Theorem 1.

(4) Describe in your own words the constant C in this theorem.

(5) Copy the table of antidifferentiation formulas. Memorize these!!!

(6) Describe a direction field in example 5. You won't be tested on this, but it's nice to see an illustration.

(7) What is rectilinear motion?