

# MAT – 112: Calculus I and Modeling

## Homework 2

Instructor: Thomas R. Cameron

Due: 2/2/2018

### Instructions

You must complete all book problems and other problems. The book problems are intended to give you practice in solving problems from the textbook. They are graded based upon completion and correctness. The other problems are intended to help further your understanding of the concepts from a theoretical point of view. These problems are more rigorously graded, with a high expectation on the student providing clear, detailed, and justified answers. Lastly, you may work with other students and ask me any questions, but you may not look up solutions online. You must write your solutions independently so I may interpret your understanding while grading.

### Book Problems

§2.1: 3, 4, 6, 8, 19, 21, 24, 38

*You should solve all these problems without using logarithms. You will start using logarithms in the next section.*

§2.2: 3, 5, 11, 12, 16, 19, 34, 36, 41, 42, 43, 44

§2.3: 4, 5, 11, 13, 20, 24, 25, 28

§2.4: 2, 6, 10, 14, 34, 36, 40, 43, 78, 81, 91, 92

### Other Problems

**Problem 1.** Use the definition of  $\sin \theta$ ,  $\cos \theta$ , and  $\tan \theta$  to show that the elementary trigonometric identities on p. 105 hold true.