

## MATH 111 Section 01 Homework 4

Below is a list of selected problems from Swokowski and Cole's Precalculus - Functions and Graphs. You will have until Friday April 11 to finish the problem set. The first problems are suggested exercises and you do not need to turn them in. The latter set you should write up carefully and neatly as they will be graded. It is in your best interest to work all of the problems. All problems from the homework are fair game on the exams! You are encouraged to work in groups, but you must write up your own solutions. I will be available during office hours for help.

### 1 Suggested Problems

§4.5) 1-33 odd

§5.1) 1-15 odd, 29, 33, 37, 45, 47, 49

§ 5.2) 1-21 odd, 35, 37, 43, 47, 49-69

### 2 Required Problems

- 1) Solve the equation

$$\log_2(x+3) = \log_2(x-3) + \log_3(9) + 4^{\log_4(3)}.$$

- 2) Exercise 41 in section 5.1. You must show your work. Just writing down the answer will give you zero credit (after all, the answer is in the back of the book). You must show me how you get the answer.
- 3) A typical tire for a compact car is 22 inches in diameter. If the car is traveling at a speed of 60 mi/hr, find the number of revolutions the tire makes per minute.
- 4) Verify the identity by transforming the left-hand side into the right-hand side.

$$(1 - \sin^2(\theta))(1 + \tan^2(\theta)) = 1.$$