

Homework 1

Math 302 (section 501), Fall 2016

This homework is due on Thursday, September 1. (Turn in your answers to questions 1–3.)

0. (*This problem is not to be turned in.*) Read the syllabus. Bookmark the course webpage on your computer, if you have one. Set up your piazza.com account. Mark both exams and their times on your calendar. (a) Where and what time are the regular office hours for this course? (b) If you miss class, where can you find the homework assignments? (c) (How) will grades be “curved”? (d) A student has received the following grades on Homeworks: 9, 10, 8, 8 (out of 10) and Exam 1: 78%. What is this student’s current grade in the class?
1. Read Section 2.1. List all defined words (in bold or italics) that you have *not* previously seen in a math class.
2. (a) How many subsets does the set $\{5, A, \textit{apple}\}$ have?
(b) Describe the following set using the **roster method**: $\{x \in \mathbb{R} \mid x^2 = 5\}$.
(c) What is the cardinality of the set $\{x \in \mathbb{R} \mid x^2 = -5\}$? Explain.
(d) What is the cardinality of the set $\{x \in \mathbb{C} \mid x^2 = -5\}$? Explain.
(e) *Prove or disprove*: $[-1, 1] \not\subseteq (-1, 1]$.
(f) *Prove or disprove*: $[-1, 1] \subsetneq (-1, 1]$.
3. Section 2.1 # 12, 17, 26, 35
4. Complete the survey (separate handout).