

MATH 152, HOMEWORK #2

DUE THURSDAY, SEPTEMBER 1

Remember, consult the Homework Guidelines for general instructions. All problems listed by section and exercise number are from our textbook.

GRADED EXERCISES:

1. Section 1.1, Exercise 2. Make sure you include a written discussion, not just graphs. It may be helpful to use color for your graphs.
2. Section 1.1, Exercise 5. Your proof should use the formal definition. Please take as given any basic set theory results you need.
3. Section 1.1, Exercise 7. Don't forget to explain why your counterexamples really are counterexamples.
4. Section 1.1, Exercise 8.
5. Section 1.7, Exercise 3.
6. Section 1.7, Exercise 5. Prove your answer is correct using induction on n .

MATH JOURNAL – please submit on a separate page (not stapled to the rest of the homework), as this will go directly to Kelli, not the grader. Choose ONE of the following and write 1-3 paragraphs (no more than one page, please).

- Choose a specific grade/course level where you would expect students to encounter functions. Think of 1-2 common mistakes or misconceptions would you expect from students at this level when working with functions. How might you deal with those?
- Reflect on any math education topic you have been thinking about. E.g., a really nice technique for teaching an idea, a situation working with a struggling student and how you handled it or wish you'd handled it, general insights on connecting with students, etc.

UNGRADED HOMEWORK:

Section 1.1, Exercises 1, 3, 4, 6.

Section 1.2, Exercise 1.

Section 1.7, Exercise 1.