

Math 13100 – Homework 3

due 2016-02-02

Please read section 1.3 and sections 1.5 in the textbook. (We'll skip section 1.4, since we're not covering trigonometric functions in this course.)

Please also do the following problems. Make sure to show all details of your work.

Also, please give at least some thought to each of the extra credit problems – they should be fun and stimulating intellectual exercise, regardless of whether you want to submit solutions for them.

From 2016-01-25

- From Problem Set 1.2: problems 26, 27
- From Problem Set 1.3: problems 4, 8, 15, 16, 26, 31, 44, 47, and for extra credit, problems 37, 40
- From Problem Set 1.5: problems 27, 28, 56

From 2016-01-27

- From Problem Set 1.1: problem 39b, 42

(Hint for 39b: use the Squeeze Theorem, bounding the problem's weird function from above by $|x|$ and from below by $-|x|$.)

(Hint for 42: use what I said in class about how a limit $\lim_{x \rightarrow c} f(x)$ only depends on what f does “locally around c ”, not on what happens far away from c , and not on what happens at c itself.)

- From Problem Set 1.5: problems 2, 6, 51, 52, 54, and for extra credit, problem 24

From 2016-01-29

- From Problem Set 1.5: problems 15, 16, 17, 18, 25