

Read: Sections 1.4, 2.1, 2.3, 3.1, 3.2, 3.3

Exercises:

- Due Wednesday, 14 January:
 - Section 1.3 (pp. 44–49): 5, 10, 11, 12, 16, 26, 29, 31, 32, 37, 42, 45, 52, 56, 57, 58, 60, 63, 65, 66, 67. [*This was on the Week #1 Handout*]
 - Section 1.4 (pp. 58–62): 5, 9, 14, 16, 20, 21, 23, 24, 27, 36, 44, 46
 - Due Tuesday, 20 January¹:
 - Section 2.3 (pp. 98–100): 2, 4, 5, 7, 8, 19, 12, 16, 20, 24
 - Section 3.1 (pp. 132–135): 5, 8, 14, 17, 22, 24, 26, 29, 30, 32, 42, 44
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1. **Quiz Thursday**, last 15 minutes of class, over material up to 2.3.
2. I hope the term is going well for you so far.
3. Section 2.1 is for you to read on your own. It has some helpful information about how to use your graphing calculator. I won't be lecturing on this material.
4. Section 2.3 is about story problems. The process given by Hungerford is helpful in understanding how to translate the words in a story problem into mathematics. The advice about drawing a picture is not meant to be patronizing; drawing pictures is a very helpful technique for visualizing the relationships in a problem. (I draw pictures when I do *my* math homework.)
5. Sections 3.1 and 3.2 are about functions. **This is perhaps the most important section of the term.** Functions are a central concept in this course, and in much of mathematics in general. Make sure you understand functions. We will be using functions for the remainder of the term.
6. Make sure you understand what $f(x)$ means. The notation $f(x)$ **does not** mean f times x ; it means “the thing you get back when you put x into the function f ”. While we're at it, be sure to read the “Caution” box on p. 139. It is super-important.
7. Wednesday, I gave an incorrect example of why you have to check your answers when solving absolute value equations. Here is a correct example:

Suppose $|x - 1| = -2x + 8$.

Then, the left side of the equation is either $x - 1$ or $-(x - 1)$. Thus,

$$\begin{array}{rcl} x - 1 = -2x + 8 & \text{or} & -(x - 1) = -2x + 8 \\ x = -2x + 9 & & 1 - x = -2x + 8 \\ 3x = 9 & & x = 7 \\ x = 3 & & \end{array}$$

So, it would seem that $x = 3$ and $x = 7$ are both solutions. Indeed,

$$|3 - 1| = |2| = 2 \text{ and } -2(3) + 8 = -6 + 8 = 2,$$

so $x = 3$ is a solution. However,

$$|7 - 1| = |6| = 6, \text{ but } -2(7) + 8 = -14 + 8 = -6,$$

so $x = 7$ is **not** a solution.

¹We do not have class Monday, 19 January, due to the Martin Luther King, Jr. holiday, so I will collect homework on Tuesday, instead.