Individual Homework #3: Due in class Friday, February 1

Again: for this and all homework assignments, please adhere to "Homework Assignment Guidelines" link under the "General Information" header of our course page. Also, **make sure** to read the "**Note/instructions**" below.

Assignment: Please read Section 1.5, 1.6, 2.1, 2.2, and 2.3 in the text, and do, and hand in, the following exercises from Sections 1.5, 2.1, 2.2, and 2.3.

Section 1.5, Part 1: Linear functions and graphs (page 50): Exercises 4, 5(b).
Section 1.5, Part 2: Linear models (pages 51–52): Exercises 6, 7, 8.
Section 1.5, Part 3: Proportionality in rate equations (pages 52–54): Exercises 13, 14.
Section 2.1 (pages 65–67): Exercises 1, 4, 7.
Section 2.2 (pages 72–73): Exercises 1, 3, 4.
Section 2.3, Part 2: Differentiation using the definition of the derivative (pages 85–87): Exercise 6.
Section 2.3, Part 3: Differentiation using rules and formulas (pages 87–89): Exercises 12, 14ace, 15.

Notes/instructions:

1. Make sure to read the relevant class notes and sections in the text carefully. Many homework exercises are very similar to worked examples in the text!!

2. **Exercises 1, 3, and 4, Section 2.2:** You may want to review the two tutorials from Week 2 of classes, for information on graphing in Sage. Please make sure your axes are labelled (you learned how to do this in tutorial).

   For Exercises 1 and 3, *only* hand in the graphs over the domain $[1.99, 2.01]$ (you don't have to hand in the graphs you did over other domains for these exercises). Make sure you've plotted and labelled, on the graphs that you hand in, the points requested in part (c) of these two exercises.

   For Exercise 4, you need only hand in the graph over $[1.999, 2.001]$; you don't need to hand in the graphs over the other domains.