

Chapter 1

- 1.1** Be able to compute the total change or the average rate of change for various quantities which may be given as a table, a graph, or a paragraph. Look at #1, 4, 7, 12, 13, 14 from section 1.1.
- 1.2** Be able to answer questions about a function given as a table, a graph, or a formula. Look at #2, 7, 10, 13, 14 from section 1.2.
- 1.3** If you are given two points, you should be able to find the equation of the line through those points. If you are given a table of values for a function, you should be able to recognize whether or not that function could be linear. If so, you should be able to fill in missing values from the table and come up with a formula for that function. If you are given a paragraph describing a linear function, you should be able to find a formula for the function. You should understand the terms *slope* and *intercept*. You should be able to compare slopes or average rates of change when looking at a graph. You should be able to compute average rates of change from a formula for some function. Look at #1, 3, 4, 7, 8, 9, 16, 20, 21, 22 from section 1.3.
- 1.4** You should understand the terms *cost*, *revenue*, *profit*, *break-even point*, and *fixed costs*. Before you can answer questions about these quantities, you will often have to come up with a formula for cost or revenue given a verbal description. Look at #1, 2, 3, 5, 6, 8, 10 from section 1.4.
- 1.6** You should understand the terms *exponential growth*, *exponential decay*, *half-life*, *doubling time*. If you are given a table of values for a function, you should be able to recognize whether or not that function could be exponential. If so, you should be able to fill in missing values from the table and come up with a formula for that function. If you are given that some quantity increases or decreases by a certain percent each year, then you should be able to come up with a formula for that quantity. Look at #1, 2, 5, 7, 13, 15, 16, 18, 20, 25 from section 1.6.
- 1.7** Be able to answer questions involving interest compounded annually or interest compounded continuously. Look at #1–11 from section 1.7.
- 1.8** Be able to use the rules of natural logarithms correctly. You may need to do this when solving problems involving exponential functions such as the problems found in sections 1.6–1.9. Look at #3–17, 33, 34, 37, 38, 40 from section 1.8.
- 1.9** Be able to answer more questions about exponential functions. Look at #1, 6, 8, 10, 11, 12, 14, 15, 17, 20 from section 1.9.

Notes

- You should bring your own calculator and be able to use its graphing and table features to solve equations to any required degree of accuracy.
- There will be a review session Thursday, September 13th beginning at 8:00 PM in LeConte 412.