

Study Guide Corrections for Fall 2007-Spring 2008

Specific Corrections

Chapter.Section	Title of Section	Page Number	Correction
1.3	Radicals and Rational Exponents	14	Note that $\sqrt{xy} = \sqrt{x}\sqrt{y}$ only when x and y are greater than or equal to 0.
2.3	Solving Equations	23	Add an example where you solve an equation by examining graph (text pg 96).
2.8	Radical and Absolute Value Equations	39	Add an example such as: Solve $ x  = -5$ , where the answer is no solutions.
3.1	Solving Inequalities	44	<ul style="list-style-type: none"> <li>• Add an example such as: Solve <math> x  &lt; -5</math>, where the answer is no solutions.</li> <li>• The “Fact” on page 47 is only true when <math>xy &gt; 0</math>. This affects example 5 on the next page, but example 6 is okay since we are assuming positive.</li> </ul>
3.7	Definition of Function	74	<p>Add the following:</p> <ul style="list-style-type: none"> <li>• Examples with finding the value of a function (such as in text page 210)</li> <li>• Information on implicit vs explicit forms for functions (pg 212)</li> <li>• Example about which point lies on graph of function (pg 221 bottom)</li> <li>• Definition of graph of a function from page 223 summary in text.</li> </ul>
3.9	Operations with Functions	80	<ul style="list-style-type: none"> <li>• The formula on page 80 is meant to be the average rate of change formula. The formula on page 81 is meant to be the difference quotient. I will change it to point out that the average rate of change and difference quotient are not the same thing.</li> <li>• Furthermore, I will add</li> </ul>

			<p>examples of calculating the average rate of change for one function between several different sets of points to illustrate the importance of average rate of change (as is done in the text on the bottom of page 233).</p> <ul style="list-style-type: none"> <li>• Example 3 should be changed so that you are finding the average rate of change between two points (1 and 2 for example).</li> <li>• For consistency, use the notation <math>(f(a)-f(b))/(a-b)</math> for the difference quotient.</li> <li>• I will add more space for a geometric description of the average rate of change – for now, you can use the bottom of page 80 or 82.</li> <li>• You may also wish to discuss the <math>m_{\text{sec}}</math> notation for average rate of change.</li> </ul>
3.11	Graphs of Special Functions	86	You may wish to add the <b>absolute value function</b> to this library of functions. (You could also choose to do this in the following section on piecewise defined functions.)
4.1	Transformations of Graphs of Functions	103	<ul style="list-style-type: none"> <li>• I would like to add an example where you graph a quadratic using graphing techniques (there is an example like this in 4.4, but an adding another example here will help emphasize the connections).</li> <li>• I would like to add a chart summarizing graphing techniques.</li> </ul>
4.2	Composition of Functions	104	Add some examples with tables for composition of functions.
4.3	Math Models	109	Add example of area as a function of $x$ as on the top of page 281 in text.
4.8	Power Functions	128	In the table, there should be a – sign in front of infinity in row three.
4.9	Zeros of	129	I would like to add a chart summarizing

	Polynomials		polynomial functions as on page 319 of text.
5.7	Exponential Functions	175	I need to add an example where you solve an exponential equation such as $2^x = \frac{1}{4}$ .

### General Corrections

- Throughout, I am hope to add some examples that involve writing as is done in the labs, to help model the kind of writing that we are looking for from the students.
- I will work to make notation and treatment match up between the Study Guide, the Lab Manual, PowerPoints, etc.