

Study Guide for Exam CH 1 and 2.1, 2.2 (Revised Fall 2013)

The best way to prepare for this exam is to do lots of problems. Your MyLabsPlus site has review problems and a practice exam and you can work these as many times as you like. You should work until you can do all problems easily. The practice exam has more problems (25) than the real thing (under 20, some with multiple parts).

Here are the main topics in each section of the textbook and assigned problems:

Section 1.1 Functions pp. 18 – 25: #5, 6, 7, 13, 14, 17, 18, 29, 32, 43, 45, 49, 61

- Determine if a given table of values represents a function. Be able to explain why or why not.
- Determine if a given graph represents a function. Be able to explain why or why not.
- Given a table of values, a graph, or a real world scenario, be able to identify the independent and dependent variables.
- Be able to find the domain and range of functions in interval notation.
- Know how to find and interpret function values, given a function table, formula, graph, or real world scenario.

Section 1.2 Graphs of Functions pp. 37 – 39: #3, 5, 19, 21, 23, 26, 31, 32, 35, 36, 37

- Graph a function by hand, using a table of values
- Find an appropriate viewing window on the graphing calculator for a given function
- Interpret function values in context, particularly when input values are realigned

Section 1.3 Linear Functions page 54 – 58: #3, 7, 15, 27, 35, 37, 38, 43, 53, 56

- Find and interpret slopes and intercepts in the context of a problem.
- Write equations of lines from application problems and interpret your answer.
- Be able to write a linear model for applications

Section 1.4 Equations of Lines pp. 70 - 74: #7, 9, 11, 15, 17, 21, 33, 35, 37, 39, 43, 44, 55

- Given two points, write the equation of a line passing through them.
- Given the slope and y-intercept of a linear function, write its equation.
- Write the equation of a line parallel or perpendicular to a given line.
- Be able to find equations of lines in applications and interpret your answer.

Section 2.1 Algebraic solutions of Linear Equations pp. 99 - 101: # 5, 7, 11, 13, 51, 53, 55, 57, 63

- Be able to solve linear equations (with fractions) Remember to divide all terms through by the LCD.
- Understand that the solution to $f(x) = 0$ is the same as the x-intercept of the graph f , which is the same as the zero of the function, f .
- Solve linear equations in context.

Section 2.2 Modeling Linear Functions pp. 116 # 5, 6, 7, 8, 21, 31

- Given a set of data, be able to create a quadratic regression model using your graphing calculator.