ALGEBRA FOR CALCULUS Stretch I Topics List for Exam 2

*.*

**Section 1.2**

* Given a correspondence, decide whether or not it is a function; like 1 – 20 on pp. 86-87
* Explain why or why not a function using the definition of a function
* Explain why the Vertical Line Test works p. 81
* Read function values from a graph
* Find function values given a function formula
* Find domain of given function, from a set of points, from a graph, and from a function rule
* Interpret function values in a word problem, like # 81 – 83 p.90

**Section 1.3**

* Find slope given two points
* Find and interpret slope in context, average rate of change, like # 41-48 on pp. 104-105
* Use function notation to interpret and express linear relationships from context, like #71 – 80 on pp. 105 – 106
* Write a linear equation from context, like 77, 79 p. 106

**Section 1.4**

* Find slope, y-intercept and x-intercept given linear function
* Write equation for line given two points
* Write equation for linear function given two points, like 31, 33 p 118
* Write equation for line parallel or perpendicular to given line
* Write equation for line given information in context; like #61 – 66 on pp. 119 – 120
* Write equation of a line in the slope intercept form

**Section 2.1**

* Given graph of a function, identify intervals over which the function is increasing, decreasing, or constant
* Given a function rule defined piecewise, determine function values
* Given a function rule defined piecewise, hand sketch its graph
* Given a graph of a piecewise function, write its function rule

**Section 2.2**

* Given the graphical representations of two functions F and G, find the domain of each function and the domains of F + G, FG, F/G, G/F, like # 33 – 35, 39, 41 on pp. 177-78
* Given two formulas that define functions (linear, quadratic, or cubic ), find their sum, difference, product, and quotient and the corresponding domains, p 174 see box.
* Given a function defined by a formula (linear, quadratic, cubic, or rational function), find the difference quotient 
* Given the graphical representation of a function, explain what the difference quotient means. See p 175

**MyLabsPlus has a set of practice HW problems (under the “homework” tab) and a practice exam (under the “Test and Quizzes” tab). The more problems you do, the better prepared you will be! Also, working through the MLP practice exam will simulate the time pressure of the real thing. Study hard!**