Topics and Concepts

Functions

1. Domain and range
2. Piecewise functions (eg. absolute value)
3. Composition of functions
4. Inverse functions
5. Exponential and logarithmic functions
6. Inverse trig functions

Limits

1. Existence of limits (eg. using left/right limits)
2. Limit laws
3. Infinite limits and vertical asymptotes
4. Continuity (and left/right continuity)
5. Discontinuities
6. Limits at infinity and horizontal asymptotes

Here are some selected problems that you can use as a guide for what to work on:

Chapter 1 Review Exercises (pp 73 -74): # 5, 7, 19, 25, 26 (a - c)
Chapter 2 Review Exercises (pp 167 - 168): # 1, 3, 5, 6, 12, 13, 14, 15, 18, 29 (a - b), 30a

Solutions to even numbered exercises:

Chapter 1 Review: 26a. $x = \ln 5$, 26b. $x = e^2$, 26c. $x = \ln(\ln 2)$
Chapter 2 Review: 6. $-\infty$, 12. $-5/81$, 14. $-1/2$, 18. 0, 30a. $f$ is continuous at $x = 2$ and $x = 3$ and is right continuous at $x = 4$. 