**Math 280 Test 2 Study Guide**

1. What it means for a sequence to have a limit (to converge) or to not have a limit (to diverge)

 **page 778:** Concept check 1; **page 779:** 2,3,4,7

2. Increasing, decreasing, monotonic, bounded – what they mean and how to show it for a sequence

 **page 778:** Concept check 2; **page 701:** 72, 81

3. Difference between a sequence and a series

 **page 778:** Concept Check 4; True/False 1

 **Theorem:** If the series converges, then.

 **Test for Divergence:** If, then the series diverges.

4. Terms of a series and partial sums of a series, how to derive a general form for each

 **page 711:** 7, 18, 45

5. The Integral Test and the remainder estimate

 **page 720:** 7, 9, 27, 31

6. Direct Comparison Test – when to find floor, when to find ceiling; working with inequalities

7. Limit Comparison Test – how to find an appropriate comparison series and then interpret results

8. Alternating Series Test – two requirements!