## MAA 4227 ADVANCED CALCULUS II HOMEWORK 2

## BOWERS

**Exercise 1.** Give  $\epsilon$ - $\delta$  proofs of the following limit statements.

(i) 
$$\lim_{x \to 2} x^3 = 8$$
  
(ii)  $\lim_{x \to 2} \sqrt{2 + x} = 2$   
(iii)  $\lim_{x \to 2} \frac{x^2 - x + 18}{3x - 1} = 4$ 

Exercise 2. Problem 14 (a)–(d), page 80 of Rudin.

Exercise 3. Problem 8, page 99 of Rudin.

Exercise 4. Problem 14, page 100 of Rudin.

Exercise 5. Problems 23 and 24, page 101 of Rudin.

Date: Due: 11am–Friday–27–February–2004.