

MAT 141
ASSIGNMENT 8
DUE NOVEMBER 8, 2005

Please write proofs (or at least some reasoning if you can't give a full proof), not just answers! So if a problem asks whether some set has a maximum, do not just write "No", write "No, it doesn't because..."

As usual, you are allowed to use all the theorems stated in the appropriate chapters of the book (whether or not we have discussed them in class).

- (1) Section 3.6, problems 18, 19, 20, 22
- (2) Section 3.8, problems 12, 16, 17
- (3) Prove that if $\lim_{x \rightarrow p^+} f(x) = \lim_{x \rightarrow p^-} f(x) = A$, then $\lim_{x \rightarrow p} f(x)$ exists and is equal to A .