Math 351: Questions for class discussion, 14 September 2018

Error term analysis



1. *Review:* Prove that
2. *Review:* Prove that ln(ln n) .
3. *Review:* Prove that .
4. pg 46/3.2.4: Prove that

*Hint: Let* Require that

1. *Review:* Prove the theorem:

(c)

1. Let. Find
2. Let. Find
3. Let . Find
4. State the K- Principle. Prove that the sequence converges.
5. Using the K- Principle prove that the sequence converges
6. *Error-form Principle:* Let an = L + en. Then an en
7. , find an M such that |en| < 0.02 for all n > M.
8. Let |a| < 1. For n ≥ 1, let

Using the *error-form principle*, prove that

1. Derive a recursive form of Newton’s method for finding roots of a differentiable function.
2. Applying Newton’s method to the polynomial f(x) = x2 – 2, find a recursive sequence that converges to Use the error-form principle to prove the result.
3. Prove that if