This list is not in final form. Like, stuff may yet be added to it.

Test #1 is

Friday
9/29/06.

The test will cover the material of Assignments #1 – #6, roughly, that is, sections 1 - 9, roughly. Note that we’ve bypassed sections 5 and 6.

What’s gonna be on the test?

(a) Definitions

(i) Existential Quantifier
(ii) Universal Quantifier
(iii) Implication
(iv) Negations of quantified statements
(v) Natural number
(vi) Integer
(vii) The Principle of Mathematical Induction
(viii) Rational number
(ix) Order axioms
(x) Real number(?)
(xi) Sequence
(xii) \( \lim(a_n) = L \) for sequence \( (a_n)_{n=p}^{\infty} \).
(xiii) upper bound of a set \( S \)
(xiv) lower bound of a set \( S \)
(xv) the maximum element of a set \( S \)
(xvi) the minimum element of a set \( S \)
(xvii) \( \text{sup}(S) \)
(xviii) \( \text{inf}(S) \)
(xix) Bounded sequence
(xx) Convergent sequence
(xxi) Divergent sequence
(xxii) The Completeness Axiom
(xxiii) The Archimedean Property of Real-Number Order.
(xxiv) The Density of the Rationals in the Reals.

(b) Give an example of...

(c) Give a counterexample for this assertion:

(d) PMI proof. Your choice from a short list.

(e) From-the-definition limit proof. Your choice from a short list.

(f) Proof of something you’ve seen already. Your choice from a short list.

(g) Opportunities to show you know how to avoid the Circular-Reasoning Police.