Topics for Week of October 18th 1999

State Machine – Termination
(Reading: F97 Lec Notes 7)

- Derived variables of state machines and related notions (decreasing, non-increasing, and non-skipping derived variables).
- Proving termination of algorithms by state machine modeling
(Main Example: the mating problem).

Well-Orderings
(Reading: S99 H18)

- Well founded posets

Sums and Series
(Reading: F97 Lec Notes 8)

- Sum of a geometric series with a finite number of terms
- Sum of a geometric series with an infinite number of terms
- Evaluating sums by reduction to related sums which have already been solved. (Reduction techniques: variable substitution, differentiation)
- Harmonic Numbers