



## Session 6

# Fundamentals: Recurrence

---

### Lecture Summary


#### Recurrence Relations

1. Review:
    - The 3 ways to specify a math sequence
    - Why interest in sequences?
    - Sequence terms: recurrences vs. summations
  2. Solving strategies (for this course), modern resources and tools
  3. Standard techniques to solve recurrence relation
    -   Forward substitutions: left for students
    - Backward substitutions (detailed step-by-step examples), strategies to solve
- 

### Session Exercise

- P7. **Use code from** P5 to output the first 50 terms of the efficiency sequence of bubble sort. Compare to results from count summation.
- 

### Reading List

 Appendix B

---

### Keywords