

# Chapter 04 — Randomized Algorithms

CS161 Reader (Plotkin F10)

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## 1 Chapter 04 — Randomized Algorithms

### 1.1 Theorem 4.3 (Expected QuickSort Comparisons) [P6]

Linearity of expectation via indicators.

### 1.2 Theorem 4.4 (Expected Linear QuickSelect) [P6,P1]

Expected shrinkage recurrence solves to  $O(n)$ .

### 1.3 Theorem 4.6 (Karger Success Probability) [P6,P7]

One run succeeds with probability  $\Theta(1/n^2)$ .