Chapter 5. Advanced Counting Techniques

Section 5.1. Recurrence Relations

Note. In this section we define a sequence recursively, similar to the classical Fibonacci sequence.

Definition 5.1.1. A *recurrence relation* for sequence $\{a_n\}$ is an equation that expresses a_n in terms of one or more of the previous terms of the sequence. A sequence is a *solution* of a recurrence relation if its terms satisfy the recurrence relation. The *initial conditions* for a sequence five the terms that precede the first term where the recurrence relation takes effect.

Example. Page 311 Example 5.

Examples. Page 316 Numbers 4, 10, 18, 56, 58.

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