**Recursion**

Recursion is a technique where a method calls itself to solve smaller instances of the same problem.

Used When:

Problems with **repetitive, smaller subproblems**

When each solution **builds on the previous one**

**Time Complexity:** O(n)

**Optimization Strategies:**

Use memorization (cache results).

Convert to iterative loop for constant space.

Use dynamic programming for more complex forecasting (e.g., variable rates, inflation, etc.).