* **Time complexity** remains **O(n)**
* **Stack safe**: avoids recursion depth problems

**2. Use Math Formula (Best for constant growth rate)**

FV=P×(1+r)nFV = P \times (1 + r)^nFV=P×(1+r)n

**Summary**

| **Approach** | **Method Used** | **Time Complexity** | **Stack Usage** | **Best For** |
| --- | --- | --- | --- | --- |
| Recursive | FutureValue(n-1) \* (1 + r) | O(n) | High | Educational, small years |
| Iterative | Loop with multiplication | O(n) | Low | Real-world safe usage |
| Formula-Based | FV = P \* (1 + r)^n | O(1) | None | Fastest and cleanest |