Doubling Strategy Analysis

- We replace the array $k = \log_2 n$ times
- The total time $T(n)$ of a series of n push operations is proportional to
  - $n + 1 + 2 + 4 + 8 + \ldots + 2^k =$
    - $n + 2^{k+1} - 1 = 3n - 1$
- $T(n)$ is $O(n)$
- The amortized time of a push operation is $O(1)$