

## Practical Analysis

Assume array  $A$  is indexed from 1 to  $n$ .

INEFFICIENT\_SORT( $A, n$ )

1. **for**  $i = 1$  **to**  $n!$  **do**
2.   Boolean  $sortedSoFar = \text{TRUE}$ ;
3.    $j = 1$ ;
4.    $P = \text{nextPermutation}(A)$ ;
5.   **while**  $j < n$  **and**  $sortedSoFar$  **do**
6.     **if**  $P[j] > P[j + 1]$
7.       **then**  $sortedSoFar = \text{FALSE}$
8.      $j++$
9.   **if** ( $sortedSoFar$ ) **then output**  $P$

Analyze the worst-case complexity of INEFFICIENT\_SORT assuming that the nextPermutation function always takes  $\Theta(n)$  time.

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Your answer should fit above the line!