

# Kth Missing Positive Number

Given an array `arr` of positive integers sorted in a **strictly increasing order**, and an integer `k`.

Return the  $k^{\text{th}}$  **positive** integer that is **missing** from this array.

## Example 1:

**Input:** `arr = [2,3,4,7,11]`, `k = 5`

**Output:** 9

**Explanation:** The missing positive integers are [1,5,6,8,9,10,12,13,...]. The 5<sup>th</sup> missing positive integer is 9.

## Example 2:

**Input:** `arr = [1,2,3,4]`, `k = 2`

**Output:** 6

**Explanation:** The missing positive integers are [5,6,7,...]. The 2<sup>nd</sup> missing positive integer is 6.

## Constraints:

- $1 \leq \text{arr.length} \leq 1000$
- $1 \leq \text{arr}[i] \leq 1000$
- $1 \leq k \leq 1000$
- $\text{arr}[i] < \text{arr}[j]$  for  $1 \leq i < j \leq \text{arr.length}$