

Maximize the minimum difference between k elements

Given an array `arr[]` of integers and an integer `k`, select `k` elements from the array such that the **minimum absolute difference** between any two of the selected elements is **maximized**. Return this **maximum** possible **minimum** difference.

Examples:

Input: `arr[] = [2, 6, 2, 5]`, `k = 3`

Output: 1

Explanation: 3 elements out of 4 elements are to be selected with a minimum difference as large as possible. Selecting 2, 2, 5 will result in minimum difference as 0. Selecting 2, 5, 6 will result in minimum difference as $6 - 5 = 1$.

Input: `arr[] = [1, 4, 9, 0, 2, 13, 3]`, `k = 4`

Output: 4

Explanation: Selecting 0, 4, 9, 13 will result in minimum difference of 4, which is the largest minimum difference possible.

Constraints:

$1 \leq \text{arr.size()} \leq 10^5$

$0 \leq \text{arr}[i] \leq 10^6$

$2 \leq k \leq \text{arr.size()}$