Given an integer array nums and an integer k, return true if it is possible to divide this array into k non-empty subsets whose sums are all equal.

**Example 1:**

Input: nums = [4,3,2,3,5,2,1], k = 4  
Output: true  
Explanation: It is possible to divide it into 4 subsets (5), (1, 4), (2,3), (2,3) with equal sums.

**Example 2:**

Input: nums = [1,2,3,4], k = 3  
Output: false

**Constraints:**

* 1 <= k <= nums.length <= 16
* 1 <= nums[i] <= 104
* The frequency of each element is in the range [1, 4].