2638. Count the Number of K-Free Subsets

Description

You are given an integer array `nums`, which contains **distinct** elements and an integer `k`.

A subset is called a **k-Free** subset if it contains **no** two elements with an absolute difference equal to `k`. Notice that the empty set is a **k-Free** subset.

Return *the number of **k-Free** subsets of* `nums`.

A **subset** of an array is a selection of elements (possibly none) of the array.

Example 1:

```
Input: nums = [5,4,6], k = 1
Output: 5
Explanation: There are 5 valid subsets: {}, {5}, {4}, {6} and {4, 6}.
```

Example 2:

```
Input: nums = [2,3,5,8], k = 5
Output: 12
Explanation: There are 12 valid subsets: {}, {2}, {3}, {5}, {8}, {2, 3}, {2, 3, 5}, {2, 5}, {2, 5, 8}, {2, 8}, {3, 5} and {5, 8}.
```

Example 3:

```
Input: nums = [10,5,9,11], k = 20
Output: 16
Explanation: All subsets are valid. Since the total count of subsets is 2^4 = 16, so the answer is 16.
```

Constraints:

- `1 <= nums.length <= 50`
- `1 <= nums[i] <= 1000`
- `1 <= k <= 1000`