

Subsets

 locked

Problem

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Problem Statement

Alice and Bob are facing a fun mathematical challenge involving a set of positive numbers. They have an array **A** of **N** numbers and want to figure out the number of ways to divide the array into two subsets such that the absolute difference between the sums of the elements in these subsets equals a given number **D**. Help them to do it.

Note: As the answer could be very big, print the answer modulo **1e9+7**.

Input Format

- First line will contain **T**, the number of test cases.
- First line of each test case will contain **N** and **D**.
- Next line of each test case will contain the array **A**.

Constraints

1. $1 \leq T \leq 100$
2. $2 \leq N \leq 1000$
3. $1 \leq D \leq 100$
4. $1 \leq A[i] \leq 100$

Output Format

- Output the number of ways to do the given task.

Sample Input 0

```
1
5 3
1 2 3 4 5
```

Sample Output 0

```
3
```

Explanation 0

In the first test case, you can divide them in 3 ways so that the difference remains 3.

1. {1,2,3} and {4,5}
2. {2,3,4} and {1,5}
3. {2,4} and {1,3,5}

Submissions: 150

Max Score: 20

Difficulty: Easy

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C++20

```
1 #include <cmath>
2 #include <cstdio>
3 #include <vector>
4 #include <iostream>
5 #include <algorithm>
6 using namespace std;
7
8
9 int main() {
10     /* Enter your code here. Read input from STDIN. Print output to STDOUT */
11     return 0;
12 }
13
```

Line: 1 Col: 1

[Upload Code as File](#) ☐ Test against custom input

Run Code

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