EXPRESSIONS

1s | 512MB

Given a list of n distinct number, Jack want to create expressions using only the numbers in the list with ***addition, multiplication*** and ***parenthesis***. Jack defines the relationship "~" between two expressions as follows:

- $a \sim (a)$
- $a + b \sim b + a$ and $a \times b \sim b \times a$
- $a + (b+ c) \sim (a + b) + c \sim a + b + c$ and $a \times (b\times c) \sim (a \times b) \times c \sim a\times b\times c$
- $1\times a \sim a$
- If $a \sim b$ and $b \sim c$ then $a \sim c$

Two expressions a and b are considered the same if and only if $a \sim b$.

Find the number of **distinct expressions** that evaluated to m.

INPUT

First line of input is T ($T \geq 1$) the number of tests. Each test will have the following format

The first line of each test is two number n, m ($1 \leq n \leq m \leq 5 \times 10^5$)

The second line of each test is n number $1 \leq a_1 < a_2 < \ldots < a_n \leq m$, the numbers on the list

It is guaranteed that the sum of m over all test cases does not exceed 5×10^5

OUTPUT

For each test output the answer on a single line, since the answer can be big, print it in modulo 998244353

Sample Input	Sample Output
5 1 1 1 1 99 2 5 5 1 2 3 4 5 1 10 1 8 5000 2 3 5 7 11 13 17 19	1 0 10 10 299891645

In the third test, 5 can be represented as

1+1+1+1+1

1+1+1+2

1 + 2 + 2

1+1+3

1 + 4

1 + 2.2

1 + (1+1).2

1 + (1+1).(1+1)

2 + 3

5

In the forth test, 10 can be represented as

1+1+1+1+1+1+1+1+1+1

1+1+1+1+1+1+(1+1).(1+1)

1+1+1+1+(1+1+1).(1+1)

1+1 + (1+1).(1+1+1+1)

1+1+ (1+1).(1+1).(1+1)

1+1+ (1+1).(1+1) + (1+1).(1+1)

1 + (1+1+1).(1+1+1)

(1+1).(1+1+1+1+1)

(1+1).(1+(1+1).(1+1))

(1+1).(1+1) + (1+1).(1+1+1)