时间限制：C/C++ 3秒，其他语言6秒
空间限制：C/C++ 262144K，其他语言524288K
64bit IO Format: %lld

题目描述

The new semester has begun, and Bob needs to start selecting courses.

There are n courses in school, the credit for the i-th course is s_i. Bob can select multiple times in the same course, if he select k_i times for the i-th course, his total credits ar

And Bob's training program has some limitations. The training program is a rooted tree of these n courses, each limitation means the total credits in the subtree of x need to

Now Bob wants to know the number of ways to select courses satisfy the limitations of training program and the total credits are w.

Two ways are different if and only if there exists at least one $i \in [1, n]$ which satisfies that the select times of the i-th courses are different in these two plans.

The answer may be very large, you only need to output the answer module 998244353.

输入描述:

The first line has two integers n, Q.

Then there are $n-1$ lines to describe the rooted tree of training program, each line has two integers a, b denote a is the par

Next line has n integers $s_{1...n}$.

Next line has n integers $c_{1...n}$.

Then there are Q lines, each line has one integers w_i denote the total credits of the i-th query.

$1 \le n \le 100$

$1 \le Q \le 10$

$1 \le s_i \le 5$

$0 \le c_i \le 150$

$1 \le a < b \le n$

$0 \le w_i \le 10^8$

输出描述:

Output Q lines, each line has one integer denote the answer of the i-th query.

示例1

输入

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