Shifts (20pts, 23pts)

Competitive Submissions

You have not attempted this problem.

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Problem

Aninda and Boon-Nam are security guards at a small art museum. Their job consists of **N** shifts. During each shift, at least one of the two guards must work.

The two guards have different preferences for each shift. For the i-th shift, Aninda will gain $\mathbf{A_i}$ happiness points if he works, while Boon-Nam will gain $\mathbf{B_i}$ happiness points if she works.

The two guards will be happy if both of them receive at least **H** happiness points. How many different assignments of shifts are there where the guards will be happy?

Two assignments are considered different if there is a shift where Aninda works in one assignment but not in the other, or there is a shift where Boon-Nam works in one assignment but not in the other.

Input

The first line of the input gives the number of test cases, **T**. **T** test cases follow. Each test case begins with a line containing the two integers **N** and **H**, the number of shifts and the minimum happiness points required, respectively. The second line contains **N** integers. The i-th of these integers is **A**, the amount of

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