Exciting Finish!

You are watching a singing contest featuring ***n*** singers, and the final round has just finished. Each singer currently has a distinct number of points. It is time to determine the final rankings. The judges will give scores to the singers, so that the total points given in the final round across all singers is equal to some fixed number ***x***. More specifically, for each singer, the judges will choose points in the final round so that each is a positive integer, and the final round points for all singers sum to ***x***.

The judges would like to make the final results as exciting as possible. To do this, they will announce the final scores one by one, in nondecreasing order. If there are ties, they will announce the final score of the singer that has the smallest current score. After each score announcements, the rankings will get updated. The final results are *exciting*, if after each announcement of points in the final round, the singer in first place (with the highest number of points) changes. The judges want to avoid any sort of controversy, so they will assign the points so that at every point during the score announcements, there is a unique singer with the highest number of points. There may be ties in the final round scores, but never in the total points.

Consider three contestants (we'll call them A, B and C). Immediately before the final round, A has 3 points, B has 1 point, and C has 4 points. The judges have 12 points to assign in the final round.

Suppose in the final round the judges give A🡐2, C🡐3, and B🡐7. Then:

- A's score (2) is announced, A is the new leader (3+2=5)
- C's score (3) is announced, C is the new leader (4+3=7)
- B's score (7) is announced, B is the new leader (1+7=8)

That's an *exciting* result! The final round scores were announced in nondecreasing order and the leader changes after every announcement, including the first, since C was in the lead before the final round! And, the judges used all 2+3+7=12 points in the final round!

In this scenario, assigning final round points A🡐3, B🡐3, C🡐6 won't work, since there's a tie at the top after the first announcement (A and B both get 3 in the final round, but B is announced first, since B has the lower score before the final round.) The assignment C🡐1, B🡐5, A🡐6 is not *exciting* since the leader does not change after the first assignment.

In this scenario, there are exactly three distinct final rankings possible:

- C, B, A announced in order A←2, B←5, C←5
- B, C, A announced in order A←2, C←2, B←8 OR A←2, C←3, B←7
- C, A, B announced in order B←4, A←4, C←4

Help the judges determine the number of distinct rankings possible that can be attained by assigning points in the final round such that the final results are *exciting*. Two ways are different if the resulting final ranking is different, regardless of the final round points given by the judges.

Input

Each input will consist of a single test case. Note that your program may be run multiple times on different inputs. Each test case will begin with a line containing two space-separated integers ***n*** ($1 \le n \le 12$) and ***x*** ($1 \le x \le 700$), where ***n*** is the number of singers, and ***x*** is the total number of points that the judges can allocate in the final round. The next line will contain ***n*** integers ***p*** ($1 \le p \le 700$) separated by spaces. These are the current points for each of the ***n*** singers.

Output

Output a single integer, which is the number of final rankings possible.

Sample Input	Sample Output
3 12 3 1 4	3
12 700 1 2 3 4 5 6 7 8 9 10 11 12	439084800
12 1 1 2 3 4 5 6 7 8 9 10 11 12	0
1 700 123	0