1127 – Funny Knapsack

Given **n** integers and a knapsack of weight **W**, you have to count the number of combinations for which you can add the items in the knapsack without overflowing the weight.

Input

Input starts with an integer **T (≤ 100)**, denoting the number of test cases.

Each case contains two integers **n (1 ≤ n ≤ 30)** and **W (1 ≤ W ≤ 2 * 10^9)** and the next line will contain **n** integers separated by spaces. The integers will be non negative and less than **10^9**.

Output

For each set of input, print the case number and the number of possible combinations.

Sample Input	Output for Sample Input
3 1 1 1 1 1 2 3 10 1 2 4	Case 1: 2 Case 2: 1 Case 3: 8