G	TikiTaka Snoozefest	Time Limit: 1 sec

Pavel Nedved, former prominent Juventus and Czech Republic Midfielder, decided to watch the second round match of Fifa World Cup Russia 2018 between former champion Spain and host Russia. He envisaged that it would be an exciting game. He was proved wrong. Russia stood most of the time near their penalty box. Spain, on the other hand, instead of attacking vigorously, passed the ball among themselves. Defenders of Spain, passed the ball among themselves; then they passed it to midfielders of their team. They passed among themselves too. Then they again passed the ball to defenders. Defenders, after passing the ball among themselves again for some times, passed it to attackers; and so on. Nedved, being so disgusted watching this snoozefest of football, started building a string which would summarize the buildup of the attacking move of Spain. He used only three characters for different positions: "**D**" for Defenders, "**M**" for Midfielders and "**A**" for attackers. How he build the string? Let's set up an example passing buildup.

1. At the beginning, Midfielders (M) passed the ball among themselves for 10 times. Then they passed it to one of the Defenders.
2. Defenders (D) passed the ball among themselves for 20 times. Then they passed it to one of the Attackers.
3. Attackers (A) passed the ball among themselves for 5 times. Then they passed it to one of the Midfielders.
4. Midfielders (M) passed the ball among themselves for 7 times. And somehow, the move was finished (the ball went out/ was intercepted etc.)

So, the string for this move is "MDAM", in order of the positions of passing build up. Total number of passes played in this move is: 10 + 1 + 20 + 1 + 5 + 1 + 7 = 45.

Nedved also heard that Spanish coach has asked the defenders to must play at least 10 passes in a single passing move among themselves (they played 20). He ordered the midfielders to play at least 6 passes in a single passing move among themselves (they played 10 and 7 in two different phases, both of which are greater than 6). For the Attackers, they were ordered to play at least 3 passes (they played 5). Nedved thought that under these constraints, this move could also be built in another way with same number of passes in total and in same order of positions of moves: 12 passes among Midfielders, 1 pass to Defenders, 13 passes among Defenders, 1 passes to Attackers, 8 passes among Attackers, 1 pass to Midfielders, 9 passes among Midfielders again finally; resulting in 12+1+13+1+8+1+9 = 45 passes. Nedved wondered that if such a move string **S** like "MDAM" is given with constraints like- at least **M** passes among Defenders, **N** passes among Midfielders and **Q** passes among Attackers have to be made (in the example, **M** = 10, **N** =6, **Q** =3); and it is said that exactly **P** passes are made; then in how many ways this passing move can be done in total?

Nedved knows someone almost having the same name as him who could help. The "almost-namesake" of Nedved has asked you to solve the problem.

Input

Input file will have an integer **T (T<=10000)** in first line, denoting the number of test cases. Then it will contain **3** lines for each of the test cases; resulting in **3T** separate lines. For each test case, the first line will denote the length **L (3 <= L <= 50)** of the string **S** denoting the passing move. **S** will be in second line of each test case. No two consecutive letters in **S** will be same. Then in the third line, 4 integers separated by a single space between themselves, **P, M, N, Q** are given. They are denoted exactly as stated previously. Here, **10<= P <= 1000**, **3 <= M, N, Q <= 10**.

Output

Print the result- in how many ways the given passing move under the constraints can be constructed- in lines, separated by a single newline after each test case. If you think no possible move exists, print **0**. As the results can be big, print them modulo **1000000007**.

Sample I/O

Input	Output
1 4 DMAM 8 1 1 1	4

Explanation:

In first sample, 4 possible passing build ups can be made under the constraints.

1. 2 Passes between Defenders, 1 pass to Midfielders, 1 pass between Midfielders, 1 pass to attackers, 1 pass between attackers, 1 pass to Midfielders, 1 pass between Midfielders.

2. 1 Pass between Defenders, 1 pass to Midfielders, 2 passes between Midfielders, 1 pass to attackers, 1 pass between attackers, 1 pass to Midfielders, 1 pass between Midfielders.

3. 1 Pass between Defenders, 1 pass to Midfielders, 1 pass between Midfielders, 1 pass to attackers, 2 passes between attackers, 1 pass to Midfielders, 1 pass between Midfielders.

4. 1 Pass between Defenders, 1 pass to Midfielders, 1 pass between Midfielders, 1 pass to attackers, 1 pass between attackers, 1 pass to Midfielders, 2 passes between Midfielders.