Bugs

You are developer at XYZ company. You like to call the bugs in your code as enemies. You maintain an array **A** of the list of enemies in decreasing order of their difficulty i.e., the most difficult bug will be the first element of the array. Initally, there is no bugs in the code. You are given **N** tasks. Each task contains one of the following two types of operations:

1. **1 P**: Add a bug with difficulty **P** into the array **A**.

2. **2**: Sort the array in decreasing order and print the difficulty of **(n / 3)**th bug in the sorted array, where **n** is the size of the array **A**. If the number of bugs is less than 3, print **Not enough enemies**.

Input Format

First line contains an integer **N**, denoting the number of tasks.

The next **N** lines contain one of the two types of operations mentioned above.

Output Format

For every operation of type 2, print the difficulty of **(n / 3)**th bug in the sorted array, where **n** is the size of the array **A**. If the number of bugs is less than 3, print **Not enough enemies**.

Constraints:

$1 \leq N \leq 5 * 10^5$

$1 \leq P \leq 10^9$

Sample Input ✎	Sample Output ✎
10	Not enough enemies
1 1	9
1 7	9
2	
1 9	
1 21	
1 8	
1 5	
2	
1 9	
2	

Explanation

Task 1: Add 1 to the array. Current array is [1].

Task 2: Add 7 to the array. Current array is [7,1].

Task 3: Array size is less than 3. Output is "Not enough enemies".

Task 4: Add 9 to the array. Current array is [9,7,1].

Task 5: Add 21 to the array. Current array is [21,9,7,1].

Task 6: Add 8 to the array. Current array is [21,9,8,7,1].

Task 7: Add 5 to the array. Current array is [21,9,8,7,5,1].

Task 8: Array size is 6. n/3 is equal to 2. Number at rank 2 in array is 9. Output is 9.

Task 9: Add 9 to the array. Current array is [21,9,9,8,7,5,1].

Task 10: Array size is 7. n/3 is equal to 2. Number at rank 2 in array is 9. Output is 9.

Determine the winner

Assume there are two programmers with their hacker names as "Flash" and "Cisco". They both took part in a contest. The rules of the contest are:

1. There will be **4 questions** to solve, P, Q, R and S.

2. Initial score (before the start of the contest) of the 4 problems is s_p, s_q, s_r and s_s.

3. After each minutes, the score of the questions, P, Q, R and S, will decrease by d_p, d_q, d_r and d_s respectively. The score **cannot decrease below half (integer division) of the initial score** for each question i.e. at a particular time, the score of the problems will be maximum of half of the initial score and the decreased score.

Flash submitted the solutions of the questions at time f_p, f_q, f_r and f_s. Cisco submitted the solutions of the questions at time c_p, c_q, c_r and c_s. Your task is to find winner of contest. The winner is the one who has more score. If the score of both the programmers is same, then winner will be the one who took less time to solve all the questions. If both the problems have same score and took same time to solve the questions, then print **Tie**.

NOTE: All the times mentioned above are in minutes. Time taken to solve all the questions is the time at which programmers submitted the last solution.

Input Format

First line of input contains an integer **T**, denoting number of test cases.

First line of each test case contains 4 space separated integers s_p, s_q, s_r, s_s denoting the initial scores for each problems.

Second line of each test case contains 4 space separated integers d_p, d_q, d_r, d_s denoting the decrease in each problem's score after each minute.

Third line of each test case contains 4 space separated integers f_p, f_q, f_r, f_s denoting the time when Flash submitted his solutions.

Fourth line of each test case contains 4 space separated integers c_p, c_q, c_r, c_s denoting the time when Cisco submitted his solutions.

Output Format

Print the winner of the competition - **Flash** or **Cisco**. If both the problems have same score and took same time to solve the questions, then print **Tie**.

Constraints

$1 <= T <= 10^5$

$100 <= s\_p, s\_q, s\_r, s\_s <= 10^6$

$0 <= d\_p, d\_q, d\_r, d\_s <= 10^6$

$0 <= f\_p, f\_q, f\_r, f\_s <= 10^6$

$0 <= c\_p, c\_q, c\_r, c\_s <= 10^6$

Sample Input ✎	Sample Output ✎
1	Flash
1000 2000 3000 4000	
1 2 30 40	
110 10 7 8	
15 30 45 20	

Explanation

Flash submitted the solutions at time 110, 10, 7 and 8 for the questions P, Q, R and S, respectively. For question P he will get score of only 1000 - 110 * 1 = 890. For question Q he will get 2000 - 10 * 2 = 1980. Similarly, for question R and S, he will get 2790 and 3680. Therefore, the total score is 9340. Total time he took to solve all problems is 110.

Cisco submitted the solutions at time 15, 30, 45 and 55 for the questions P, Q, R and S, respectively. So he will get 985, 1940, 1650 and 3200 score for the questions P, Q, R and S, respectively. Total score is 7775. Total time he took to solve all problems is 45.

Since Flash's total score is greater than CiscoX, Flash is the winner.