Problem

Mahabharat in Parallel Universe

Yudhisthira and Duryodhana, the two brothers, wanted to play a game to acquire the kingdom of Hastinapuram. So, they decided to play an analytical game instead of a huge war which can cause many lives.

Game Setup:

Yudhisthira has n $asthras$ with ability values $\{a_1, a_2, \ldots, a_n\}$ and Duryodhana has m $asthras$ with ability values $\{b_1, b_2 \ldots, b_m\}$. Each player has an opportunity to choose two $asthras$: one on their side and one on the other side.

Then, these $asthras$ will fight each other. Suppose the ability values for the chosen $asthras$ are x and y respectively, then the ability values of the $asthras$ will become $x - y$ and $y - x$ respectively. If the ability value of any $asthra$ is smaller than or equal to 0, the $asthra$ fails and cannot be used again.

The game ends when at least one player has no $asthras$ are left . The winner is the player with at least one $asthras$ is left with him. If both players have no $asthras$ left, the game ends in a draw and the kingdom will be shared.

Find the result of the game when both players play optimally.

Note : Yudhisthira always starts the game first.

Input:

Each test contains multiple test cases. The first line of input contains a single integer t $(1 \leq t \leq 2 \times 10^3)$ — the number of test cases. The description of test cases follows.

The first line of each test case contains two integers n and m $(1 \leq n, m \leq 50)$ — the number of $asthras$ Yudhisthira and Duryodhana have respectively.

The second line of each test case contains n integers $\{a_1, a_2, \ldots, a_n\}$ $(1 \leq a_i \leq 10^9)$ — the ability values of Yudhishthira's $asthras$.

The third line of each test case contains m integers $\{b_1, b_2 \ldots, b_m\}$ $(1 \leq b_i \leq 10^9)$ — the ability values of Duryodhana's $asthras$.

Output:

For each test case, output Yudhisthira if Yudhisthira wins, Duryodhana if

Duryodhana wins, and Draw if the game ends in a draw. (Output without quotes.)

Example

Sample Input

```
6
1 3
9
1 2 3
2 3
1 2
1 1 1
3 2
1 2 3
1 1
3 3
1 1 1
2 2 2
10 10
1 2 3 3 2 2 1 1 2 2
3 3 3 3 2 1 1 1 1 1
10 10
1 2 3 4 5 6 7 8 9 10
6 7 8 9 10 11 1 1 1 1
```

Sample Output

```
Yudhisthira
Draw
Yudhisthira
Duryodhana
Draw
Draw
```

Explanation

Consider the first test case. It can be shown that Yudhisthira has a winning strategy. The following is a possible way that Yudhisthira can win (note that the players may not be playing optimally in this example):

- In the first move, Yudhisthira chooses a $asthra$ with ability value 9 on his side to fight against a $asthra$ with ability value 1 on Duryodhana's side, the ability value of both $asthra$ become 8 and -8 respectively. The $asthra$ with ability value $-8-8$ on Duryodhana's side becomes unusable.
- In the second move, Duryodhana chooses a $asthra$ with ability value 2 on his side to fight against a $asthra$ with ability value 8 on Yudhisthira's side, the

ability value of both $asthra$ become -6 and 6 respectively. The $asthra$ with ability value -6 on Duryodhana's side becomes unusable.
- In the third move, Yudhisthira chooses a $asthra$ with ability value 6 on his side to fight against a $asthra$ with ability value 3 on Duryodhana's side, the ability value of both $asthra$ become 3 and -3 respectively. The monster with ability value -3 on Duryodhana's side becomes unusable.
- Now, Duryodhana has no $asthras$ left. Since Yudhisthira still has at least 1 $asthra$ left alive, Yudhisthira wins.

Select the Language for this assignment. [-- ⌄]

You may submit any number of times before the due date. The final submission will be considered for grading.

This assignment has Public Test cases. Please click on "Compile & Run" button to see the status of Public test cases. Assignment will be evaluated only after submitting using Submit button below. If you only save as or compile and run the Program , your assignment will not be graded and you will not see your score after the deadline.

Save as <u>D</u>raft	<u>C</u>ompile & Run	<u>S</u>ubmit	<u>R</u>eset

Sample Test Cases

Input	Output

Test Case 1

```
10
39 6
84 94 10 90 30 64 37 35 27 3 54 47 57 17 96 86 74
84 64 37 85 98 82 15 35 1 94 73 13 67 7 92 1 45 96
42 85 77 16
2 29 48 34 40 89
50 5
79 75 99 1 28 12 63 69 48 41 50 94 58 22 73 44 50
97 81 25 88 78 31 72 15 89 25 30 20 72 15 45 70 59
26 34 81 48 50 89 17 61 19 62 54 70 72 29 14 71
5 19 98 4 89
44 14
58 100 21 23 67 4 50 11 14 67 85 22 65 100 32 93 77
5 65 71 15 52 40 29 3 58 34 84 50 85 74 88 27 25 20
24 53 24 56 5 57 75 29 10
75 28 88 98 89 82 59 59 36 37 66 44 19 92
23 10
27 18 55 64 36 73 11 54 28 73 34 93 56 95 68 100 39
79 2 12 93 27 14
84 57 90 11 5 9 52 51 37 15
2 1
68 64
43
39 10
45 25 97 44 17 67 60 66 40 32 57 1 87 46 87 80 56 2
93 93 59 87 42 100 74 67 47 85 62 91 1 93 24 30 26
79 18 33 42
68 76 23 63 86 6 72 28 31 42
24 13
32 15 80 59 74 50 96 23 82 51 38 11 14 23 100 32 79
56 78 76 25 79 53 14
18 22 5 67 39 64 80 3 62 94 31 31 43
13 25
21 81 35 67 17 55 14 40 18 4 45 54 39
82 29 3 27 96 40 1 2 93 63 29 49 78 92 99 27 99 61
54 47 38 66 51 7 76
29 34
95 18 19 76 25 24 25 54 89 86 83 85 75 67 18 57 68
74 72 6 22 26 88 45 55 94 58 61 46
38 28 91 89 63 36 16 20 51 35 10 100 18 40 18 20 1
90 58 95 53 90 34 93 82 5 29 58 84 75 15 82 43 97
45 29
59 85 52 32 83 88 90 75 44 87 47 6 78 91 84 60 44
82 27 67 65 39 90 63 23 15 90 53 85 58 5 25 53 90
61 46 60 3 92 39 48 73 91 19 99
95 20 66 63 91 65 63 57 34 7 57 12 64 53 20 79 45
61 52 67 15 11 25 79 49 15 13 5 2
```

```
Yudhisthira
Yudhisthira
Yudhisthira
Yudhisthira
Yudhisthira
Yudhisthira
Yudhisthira
Duryodhana
Duryodhana
Yudhisthira
```

| Test Case 2 | 10
7 6
16 42 85 42 26 42 29
38 7 45 21 83 83
7 9
6 21 92 81 61 61 14
24 15 18 20 94 83 94 65 98
7 2
44 23 26 11 63 99 45
164 147
5 1
54 50 73 95 47
319
6 10
36 40 76 54 3 69
220 20 16 6 10 2 4 0 0 0
3 10
29 41 66
51 100 40 94 29 71 35 87 91 65
2 9
9 56
40 25 0 0 0 0 0 0 0
5 3
81 39 93 86 44
2 82 74
8 3
64 19 22 91 87 84 28 31
3 72 87
5 2
80 95 98 99 96
71 60 | Yudhisthira
Duryodhana
Draw
Draw
Draw
Duryodhana
Draw
Yudhisthira
Yudhisthira
Yudhisthira |