

D. Flatland Fencing

time limit per test: 2 seconds
memory limit per test: 256 megabytes
input: standard input
output: standard output

The King of Flatland will organize a knights' tournament! The winner will get half the kingdom and the favor of the princess of legendary beauty and wisdom. The final test of the applicants' courage and strength will be a fencing tournament. The tournament is held by the following rules: the participants fight one on one, the winner (or rather, the survivor) transfers to the next round.

Before the battle both participants stand at the specified points on the Ox axis with integer coordinates. Then they make moves in turn. The first participant moves first, naturally. During a move, the first participant can transfer from the point x to any integer point of the interval $[x + a; x + b]$. The second participant can transfer during a move to any integer point of the interval $[x - b; x - a]$. That is, the options for the players' moves are symmetric (note that the numbers a and b are not required to be positive, and if $a \leq 0 \leq b$, then staying in one place is a correct move). At any time the participants can be located arbitrarily relative to each other, that is, it is allowed to "jump" over the enemy in any direction. A participant wins if he uses his move to transfer to the point where his opponent is.

Of course, the princess has already chosen a husband and now she wants to make her sweetheart win the tournament. He has already reached the tournament finals and he is facing the last battle. The princess asks the tournament manager to arrange the tournament finalists in such a way that her sweetheart wins the tournament, considering that both players play optimally. However, the initial location of the participants has already been announced, and we can only pull some strings and determine which participant will be first and which one will be second. But how do we know which participant can secure the victory? Alas, the princess is not learned in the military affairs... Therefore, she asks you to determine how the battle will end considering that both opponents play optimally. Also, if the first player wins, your task is to determine his winning move.

Input

The first line contains four space-separated integers — x_1, x_2, a and b ($x_1 \neq x_2, a \leq b, -10^9 \leq x_1, x_2, a, b \leq 10^9$) — coordinates of the points where the first and the second participant start, and the numbers that determine the players' moves, correspondingly.

Output

On the first line print the outcome of the battle as "FIRST" (without the quotes), if both players play optimally and the first player wins. Print "SECOND" (without the quotes) if the second player wins and print "DRAW" (without the quotes), if nobody is able to secure the victory.

If the first player wins, print on the next line the single integer x — the coordinate of the point where the first player should transfer to win. The indicated move should be valid, that is, it should meet the following condition: $x_1 + a \leq x \leq x_1 + b$. If there are several winning moves, print any of them. If the first participant can't secure the victory, then you do not have to print anything.

Examples

input
0 2 0 4
output
FIRST 2

input
0 2 1 1
output

SECOND
input
0 2 0 1
output
DRAW

Note

In the first sample the first player can win in one move.

In the second sample the first participant must go to point 1, where the second participant immediately goes and wins.

In the third sample changing the position isn't profitable to either participant, so nobody wins.