F Jumping Worm (Eww)

Time Limit	1 second

The forest where a little worm lives has **n** trees, neatly located at positions **1** to **n**. The worm dreams to be the first ever being to place its slimy belly on the moon... Nah, not really. Well, he just wants to be at the top of the **n**-th tree. Right now, the little worm is at the base of the 1-st tree. He can move in one of the following two ways:

1. When he is on the **i**-th tree, he can climb up $\mathbf{u_i}$ units at a time. The height after any climb will never be higher than the height of the tree.

2. He can jump from the **i**-th tree to an adjacent tree (i.e., the (i – 1)-th or the (i + 1)-th tree). The worm is a good jumper, so he can jump to the same height on the nearby tree. However, **if the top of the nearby tree is lower than the worm's current height, the worm will end up on the top of this lower tree.**

Each move takes the worm 1 second. But after each move, the worm has to rest for 1 second. During this time, he will fall down due to gravity for $\mathbf{d_i}$ units if he is on the **i**-th tree. Yet he cannot go below height 0. There is an exception to this rule: when the little worm jumps to the top of a tree, he does <u>not</u> have to rest; he can continue moving right after his previous jump. Because trees are generally different, the $\mathbf{u_i}$ and $\mathbf{d_i}$ of different trees can be different.

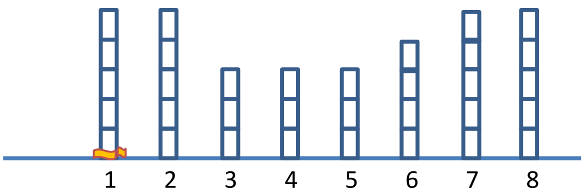
<u>**Remarks**</u>: Each of the two maneuvers requires exactly 1 second, even in the cases where the movement does not go the full length because it reaches the top or the bottom of a tree.

Your Task

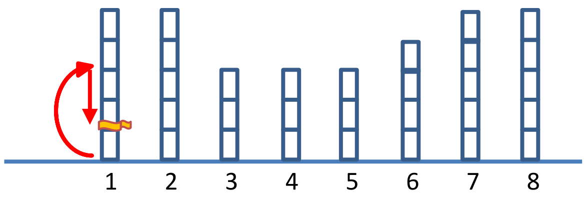
Given **n** trees, the $\mathbf{u_i}$'sand $\mathbf{d_i}$'s of all trees, find the shortest travel time (in seconds) from the base of the 1st tree to the top of the **n**-th tree.

<u>**Example:**</u> (See the next Page) There are 8 trees, whose heights (left to right) are 5, 5, 3, 3, 3, 4, 5, and 5 units, as shown below. All the $\mathbf{u_i}$'s are 3 units per second, and the $\mathbf{d_i}$'s are 2 units per second. Figures a) – g) show one possible way for the little worm to move from the starting position, the base of the first tree to the top of the 8-th tree in Figure f).

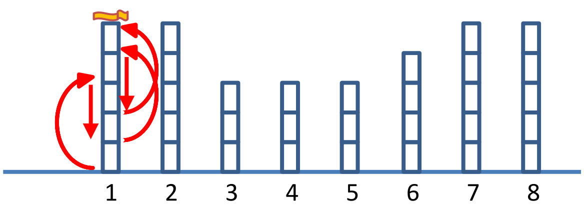
a) The little worm begins at the base of the first tree.



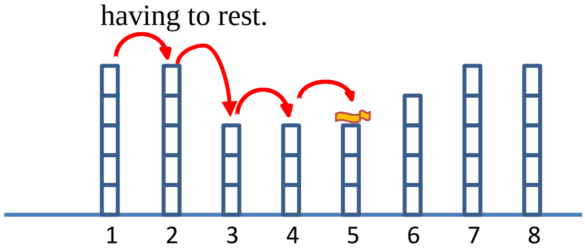
b) After the worm climbed 3 units up and fell 2 units down by 2 during the wait, he ended up at the position of the flag.



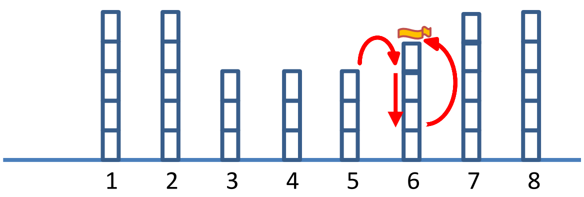
c) It must spend 5 seconds to get to the top.



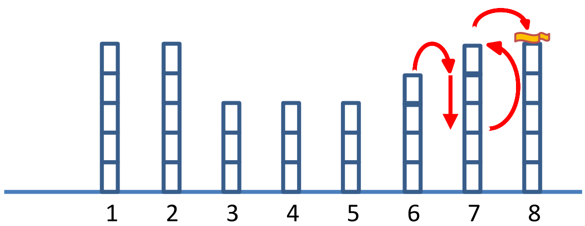
d) Then, he jumped to trees 2, 3, 4, 5 in seconds 6, 7, 8, 9, respectively, without having to rest.



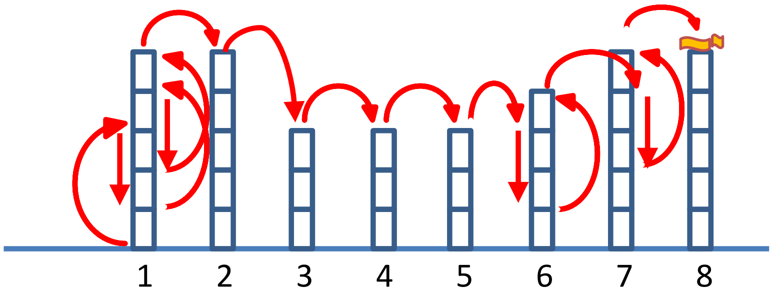
e) While on the 6-th tree, the little worm was not at the top, so it must rest for 1 second. During that time, he fell down for 2 units. Then, he moved to the top of the tree again.



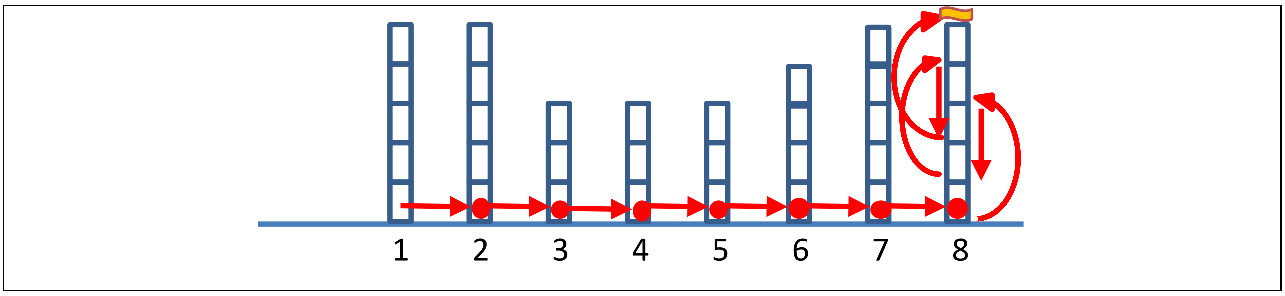
f) The little worm continued its journey to the top of the 8-th tree.



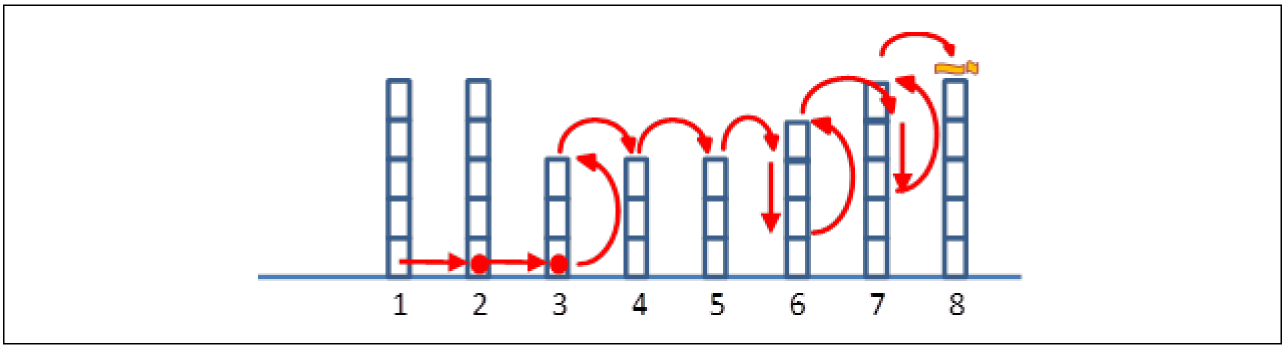
g) This figure summarized the trip of the little worm from Figure a) to Figure f). The total time required for this trip is 16 seconds.



Now if the worm decides to instead jump from the base of one trees to the next as shown in the figure below, and only climbs up on the last tree, he will take a total of 19 seconds. Note that since the jump is not made at the top, he must rest for 1 second (shown as dots). Also, since the worm is at the base, he cannot fall further while resting.



It turns out for this particular example, the shortest possible travel time for the little worm is 14 seconds, as shown in the figure below.



Input

For the first line, there is a single integer, **K**, representing the number of test cases. For each test case, there are 4 lines.

1) The first line contains a single integer, **n**, the number of the trees, $0 < \mathbf{n} \leq 1{,}000$.
2) The second line contains **n** numbers, $\mathbf{h_i}$, where **i** goes from 1 to **n**. Note that $\mathbf{h_i}$ represents the height of each tree, where $1 \leq \mathbf{h_i} \leq 1{,}000$.
3) The second line contains **n** numbers, $\mathbf{u_i}$, where **i** goes from 1 to **n**. Note that $\mathbf{u_i}$ represents the climb rate of each tree, where $1 \leq \mathbf{u_i} \leq 1{,}000$.
4) The second line contains **n** numbers, $\mathbf{d_i}$, where **i** goes from 1 to **n**. Note that $\mathbf{d_i}$ represents the fall rate of each tree, where $1 \leq \mathbf{d_i} \leq 1{,}000$.

Output

For each test case, you print on a single line the shortest travel time of the little worm. However, if it is not possible to reach the top of the **n**-th tree, you will print, in all capital letters, the word “`NEVER`” (without the quotation of course).

Sample Input/Output

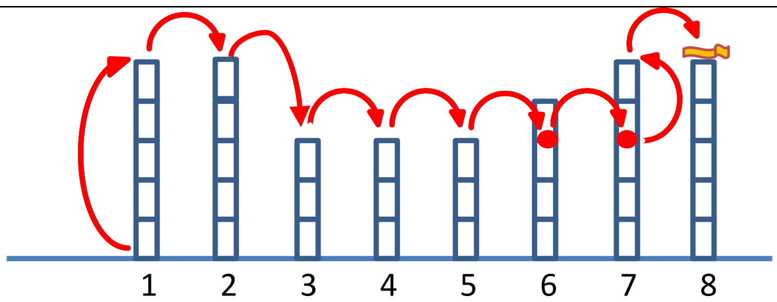
Input:	*Output:*
1 8 5 5 3 3 3 4 5 5 3 3 3 3 3 3 3 3 2 2 2 2 2 2 2 2	14

Explaination: This is the example given in the description of the problem above.

Input:	*Output:*
3 8 2 2 2 2 2 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 8 5 5 3 3 3 4 5 5 6 6 6 6 6 6 6 6 0 0 0 0 0 0 0 0 8 5 5 3 3 3 4 5 5 3 3 1 1 1 1 3 1 2 1 0 4 0 4 1 2	NEVER 11 16

For the first test case: The poor little worm cannot climb at all because after each climb of 1 unit, he also fells 1 unit down.

For the second test case: Even if he can climb 6 units in one second on the first tree, the tree's height is only 5 units. Hence, he ended up there at the top of the 1st tree after 1 second. After the jump to the 6th tree, the worm did not fall down because $d_i = 0$. However, he still needed to rest for 1 second (as shown in dot). The same thing happened on the next jump to the 7th tree. Finally, he made the move as shown in the figure below, using the total of 11 seconds.



For the third case:

The shortest travel time is 16 seconds. The worm can travel as shown in the figure below.