Exams

Input file:	`standard input`
Output file:	`standard output`
Time limit:	2 seconds
Memory limit:	256 megabytes

It's exams time and you need to study. You have n subjects and each subject is graded from 0 to 100 (inclusive). With your current study you know you can get a_i in the i^{th} subject. And to increase your grade in the i^{th} subject by one you need to study for c_i minutes. Of course, you can't get more than 100 in any subject.

To make your mother happy your results need to satisfy two conditions:

- You need to pass each subject by getting **at least 50** in each subject.
- You need to outperform your cousin in **at least one subject** by getting **strictly more than him** in at least one subject.

You know that he will get b_i in the i^{th} subject and that he won't study more. Find the minimum number of minutes you need to study to make your mother happy or state that it is impossible.

Input

The first line of the input will contain T which is the number of cases you need to solve.

Then for each case, four lines will follow:

The first line of each case will contain a single integer n which is the number of subjects. ($1 \leq n \leq 10^5$)

The second line of each case will contain n integers $a_1, a_2, ..., a_n$ which are your current grades ($0 \leq a_i \leq 100$).

The third line of each case will contain n integers $b_1, b_2, ..., b_n$ which are your cousin's current grades ($0 \leq b_i \leq 100$).

The fourth line of each case will contain n integers $c_1, c_2, ..., c_n$ which are the number of minutes you need to study to increase your grade in a subject by 1 ($1 \leq c_i \leq 10^9$)

It's guaranteed that the sum of n over all cases doesn't exceed $5 * 10^5$

Output

For each case print the minimum number of minutes required to study or -1 if there is no answer.

Scoring

Sub task #1 (13 points): ($1 \leq n \leq 2$).

Sub task #2 (27 points): ($1 \leq n \leq 100$).

Sub task #3 (23 points): ($c_i = 1$ for all ($1 \leq i \leq n$).

Sub task #4 (37 points): (No additional constraints).

Example

standard input	standard output
3 1 0 50 10 1 100 100 10 3 40 50 0 80 100 55 1 2 3	510 -1 178

Note

In the first example, You can study to get 51 marks with total of $51 * 10 = 510$ minutes.

In the second example, Your cousin already got 100 so you can't get more than him.

In the third example, your final marks will be [50 50 56] in the three subjects. So you need to increase the first subject by 10, the second by 0 and the third by 56 so in total you will study for $10*1+0*2+56*3 = 178$ minutes

Warning: Large Input/Output files. Be sure to use fast I/O methods.