

Problem 5 - Beverage

As a cute slim rich boy, Small2Kuo loves to drink beverages, and his wallet is heavy and full. Now he wants to buy a beverage with price p NTD in ADA Shop. To make his wallet lighter, he decides to pay exactly p NTD by coins and/or banknotes as many as possible.

For example, if $p = 20$ and he has two NT\$10 coins, four NT\$5 coins, and six NT\$1 coins, he will pay it by three NT\$5 coins and five NT\$1 coins. But this task is incredibly hard since he is too rich and the beverage is too expensive, can you help him?

Input Format

The first line contains an integer T indicating the number of test cases. Each test case is a line with 11 integers $p, c_1, c_5, c_{10}, c_{20}, c_{50}, c_{100}, c_{200}, c_{500}, c_{1000}, c_{2000}$, specifying the price of the beverage, and the number of coins and banknotes in each denomination. The number c_i means how many coins/banknotes in denominations of i NTD in his wallet.

- $1 \leq T \leq 100000$
- $0 \leq p \leq 10^9$
- $0 \leq c_i \leq 100000$

Output Format

For each test case, please output the maximum number of coins and/or banknotes he can pay for exactly p dollars. If he cannot pay for exactly p NTD, please simply output -1 .

Sample Input

```
3
20 6 4 2 0 0 0 0 0 0 0
100 5 1 4 0 0 0 0 0 0 0
2014 9 8 7 6 5 4 3 2 1 0
```

Sample Output

```
8
-1
39
```

Hint

- Greedy is your friend, dynamic programming might be too slow for this problem.
- Be careful with strange denominations which are rarely used.