Help DarkPi in NTU ACM

Description

As a talent programmer, DarkPi plays well in programming contest.

Since he is very smart, he can solve any problem if he has enough time. But the duration of contest is short, sometimes he may need to give up some problems, even though he is DarkPi. Let's imagine that he is participating the contest "NTU preliminary 2014 - Individual", there are 8 problems and the duration is 240 minutes. For i-th problem, DarkPi can code that in c_i minutes, and get "Accepted" with probability p_i. If the first submission failed, he needs d_i minutes to debug. After debugging, he would definitily get "Accepted", since he is DarkPi!

You know that DarkPi can switch to another problem at any time without any additional cost, and he always use the optimal strategy, which maximizes the expected number of problems he can solved during the contest.

Input

The first line contains a integer T indicating the total number of test cases. Each test case contains 8 lines, and each line contains three numbers c_i, p_i, d_i. Note that c_i, d_i are integers, and p_i is a floating number with at most three digits after the decimal point. There is a blank line between test cases to make your eyes comfortable.

- $T \leq 100$
- $1 \leq c_i \leq 240$
- $0 \leq p_i \leq 1$
- $1 \leq d_i \leq 240$

Output

For each test case, print the expected number of problems solved by DarkPi.

Sample Input

```
3
20 0.500 10
20 0.500 10
20 0.500 10
20 0.500 10
20 0.500 10
20 0.500 10
20 0.500 10
20 0.500 10

30 0.111 19
31 0.222 18
32 0.333 17
33 0.444 16
34 0.555 15
35 0.666 14
36 0.777 13
37 0.888 12

8 0.939 148
56 0.005 22
173 0.507 136
104 0.696 200
127 0.180 173
25 0.469 150
189 0.414 17
97 0.153 4
```

Sample Output

```
8.000000000
5.573849601
3.408000000
```