**Problem**

You are given a,b and c.You need to convert a to b.  
You can perform following operations :-  
1) Multiply a by c.  
2) Decrease a by 2.  
3) Decrease a by 1.  
You can perform this operation in any order and any number of times.  
You need to find and print minimum number of steps to convert a to b.

**Constraints :-**

1≤t≤104

0≤a,b,c≤109

**Input : -**

First line contains nuber of test cases.

Next t line for contains three space separated integer  a,b,c..

**Output : -**

Print minimum no. of steps as output in new line for each test case.

**Sample Input**

2

3 10 2

11 6 2

**Sample Output**

3

3

Time Limit: 1

Memory Limit: 256

Source Limit:

**Explanation**

For test case 1: -

1) First multple 3 with 2 then

2) Subtract 1 from 6 to get 5

3) Multiple 5 with 2  to get 10.

So, 3 steps.

For test case 2: -

1) Subtact 2 from 11 , 2 times

2) Subtract 1 from 7.

So, 3 steps.