**CONVERT**

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 :-**

**Input : -**

First line contains nuber of test cases.Next line for contains three space separated integer.

**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

Explanation

For test case: -

1) First multiple with then

2) Subtract from  to get

3) Multiple with   to get

.

So, 3 steps.

For test case: -

1) Subtact from, 2 times

2) Subtract from 7.