

## B. Fireworks

time limit per test: 1 second  
memory limit per test: 256 megabytes  
input: standard input  
output: standard output

One of the days of the hike coincided with a holiday, so in the evening at the camp, it was decided to arrange a festive fireworks display. For this purpose, the organizers of the hike bought two installations for launching fireworks and a huge number of shells for launching.

Both installations are turned on simultaneously. The first installation launches fireworks every  $a$  minutes (i.e., after  $a, 2 \cdot a, 3 \cdot a, \dots$  minutes after launch). The second installation launches fireworks every  $b$  minutes (i.e., after  $b, 2 \cdot b, 3 \cdot b, \dots$  minutes after launch).

Each firework is visible in the sky for  $m + 1$  minutes after launch, i.e., if a firework was launched after  $x$  minutes after the installations were turned on, it will be visible every minute from  $x$  to  $x + m$ , inclusive. If one firework was launched  $m$  minutes after another, both fireworks will be visible for one minute.

What is the maximum number of fireworks that could be seen in the sky at the same time?

### Input

Each test consists of several test cases. The first line contains a single integer  $t$  ( $1 \leq t \leq 10^4$ ) — the number of test cases. Then follow the descriptions of the test cases.

The first and only line of each test case contains integers  $a, b, m$  ( $1 \leq a, b, m \leq 10^{18}$ ) — the frequency of launching for the first installation, the second installation, and the time the firework is visible in the sky.

### Output

For each set of input data, output a single number — the maximum number of fireworks that can be seen simultaneously.

Example

input

6  
6 7 4  
3 4 10  
7 8 56  
5 6 78123459896  
1 1 1  
1 1 1000000000000000000

output

2  
7  
17  
28645268630  
4  
2000000000000000002

**Note**

In the first set of input data, the fireworks are visible in the sky for 5 minutes. Since the first installation launches fireworks every 6 minutes, and the second one every 7 minutes, two fireworks launched from the same installation will not be visible in the sky at the same time. At the same time, after 7 minutes from the start of the holiday, one firework from the first and one from the second camp will be visible. Thus, it is possible to see no more than 2 fireworks simultaneously.

In the third set of input data, 17 fireworks will be visible after 112 minutes:

- 9 fireworks launched from the first installation at times [56, 63, 70, 77, 84, 91, 98, 105, 112];

Codeforces Round 935 (Div. 3)

Finished

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Start virtual contest

→ Problem tags

math

number theory

\*900

No tag edit access

→ Contest materials

Announcement

Tutorial

- 8 fireworks launched from the second installation at times [56, 64, 72, 80, 88, 96, 104, 112].

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