Area and line

Esraa, Morgan, Hussein and Yasser didn't love geometry but Abdelkarim loved it so much. Abdelkarim (the coach) decided to challenge them, he gave them a linear function and he wanted them to calculate the area between the line, x-axis and y-axis.

They want you to help them solve this problem. You will be given a, b, c as ay = bx + c.

find the area between this line , x-axis and y-axis

It is guaranteed that the area is an integer number .

it is guranteed that the line is not parallel to x-axis or y-axis

Input

The first line of input begins with a line containing T the number of test cases.

Each testcase starts with a line contains three seperated integer numbers a,b,c ($-10^9 \le a,b,c \le 10^9$)

Output

For each test case print a line contains the area between the x-axes ,y-axis and the line .

Example

Input:
2
2 4 8
2 4 0

Output:
4
0