

This time Sunil and Ranjeet decided to visit France in their holidays. They were standing in front of Eiffel Tower. To kill the time Ranjeet got an idea of playing a game so they rearranged the shape of Eiffel tower. Now Eiffel towers look like an infinite number of poles in a row. Initially Sunil was at m position and Ranjeet was at n position. They started to jump by m and n steps respectively. Now, Sourav Saha being a data-scientist wants to collect some data for upcoming machine learning project which may change the future of our country. So, he wants to know **k th pole** which is visited by either Sunil or Ranjeet. Being a responsible citizen of your country help Sourav Saha to find and collect the data.

Input:

First line consists of an integer T , denoting the number of test cases.
Second line contains three integers m, n and k

Output :

For each test case, print the **k th** number in a new line.

Constraint:

$1 \leq T \leq 10^5$
 $1 \leq m, n \leq 10^4$
 $1 \leq k \leq 10^9$

Sample Test Case:

input:
1
4 5 6

output:
15

Explanation:

Initially Sunil is at pole 4 and Ranjeet is at pole 5.
So poles visited by Sunil are 4, 8, 12, 16, 20, 24,
poles visited by Ranjeet are 5, 10, 15, 20, 25, 30, 35,

So poles visited by either Sunil and Ranjeet are 4, 5, 8, 10, 12, 15, 16, 20, 24, Hence 6th pole is 15.