

Find the Insect



Consider a 2D-coordinate system. An insect is initially at the position $(0, l)$. At time $t = 0$, the insect starts moving in a circular manner that it is always at a distance of l units from the origin $(0, 0)$. At time $t = 1s$, the insect is p units away from the X-axis. Find the y-coordinate at time $t = X$.

Input Format

- The first line contains the number of test cases T .
- Each line of the following test cases contains three integers l, p, X .

Constraints

- $1 \leq T \leq 10^3$
- $1 \leq p \leq l \leq 10^9$
- $1 \leq X \leq 10^{18}$

Output Format

For each test case, find the y-coordinate. The y-coordinate can be expressed in a a/b format, where $\gcd(b, 10^9+7) = 1$. If B is the modular inverse of b w.r.t 10^9+7 then print the value of $(a * B) \% 1000000007$.

Sample Input 0

```
3
4 2 2
3 2 3
6 5 4
```

Sample Output 0

```
1000000005
555555557
148148145
```