# Baby Step, Giant Step

HackerRank

You are standing at point $(0, 0)$ on an infinite plane. In one step, you can move from some point $(x_f, y_f)$ to any point $(x_t, y_t)$ *as long as* the Euclidean distance, $\sqrt{(x_f - x_t)^2 + (y_f - y_t)^2}$, between the two points is either $a$ or $b$. In other words, each step you take must be exactly $a$ or $b$ in length.

You are given $q$ queries in the form of $a$, $b$, and $d$. For each query, print the minimum number of steps it takes to get from point $(0, 0)$ to point $(d, 0)$ on a new line.

**Input Format**

The first line contains an integer, $q$, denoting the number of queries you must process.
Each of the $q$ subsequent lines contains three space-separated integers describing the respective values of $a$, $b$, and $d$ for a query.

**Constraints**

- $1 \leq q \leq 10^5$
- $1 \leq a < b \leq 10^9$
- $0 \leq d \leq 10^9$

**Output Format**

For each query, print the minimum number of steps necessary to get to point $(d, 0)$ on a new line.

**Sample Input 0**

```
3
2 3 1
1 2 0
3 4 11
```

**Sample Output 0**

```
2
0
3
```

**Explanation 0**

We perform the following $q = 3$ queries:

1. One optimal possible path requires two steps of length $a = 2$: $(0, 0) \xrightarrow{2} (\frac{1}{2}, \frac{\sqrt{15}}{2}) \xrightarrow{2} (1, 0)$. Thus, we print the number of steps, $2$, on a new line.
2. The starting and destination points are both $(0, 0)$, so we needn't take any steps. Thus, we print $0$ on a new line.

3. One optimal possible path requires two steps of length $b = 4$ and one step of length $a = 3$: $(0,0) \xrightarrow[4]{} (4,0) \xrightarrow[4]{} (8,0) \xrightarrow[3]{} (11,0)$. Thus, we print $3$ on a new line.