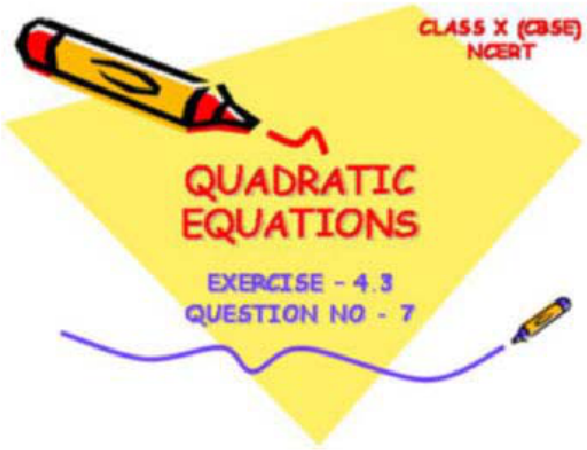
UVa Online Judge

11934 Magic Formula

You are given a quadratic function,

$$f(x) = ax^2 + bx + c$$



You are also given a divisor d and a limit L. How many of the function values $f(0), f(1), \ldots, f(L)$ are divisible by d?

Input

Input consists of a number of test cases. Each test case consists of a single line containing the numbers $a\ b\ c\ d\ L$ ($-1000 \leq a, b, c \leq 1000$, $1 < d < 1000000$, $0 \leq L < 1000$).

Input is terminated by a line containing '`0 0 0 0 0`' which should not be processed.

Output

Print the answer for each test case (the number of function values $f(0), f(1), \ldots, f(L)$ divisible by d) on a separate line.

Sample Input

```
0 0 10 5 100
0 0 10 6 100
1 2 3 4 5
1 2 3 3 5
0 0 0 0 0
```

Sample Output

```
101
0
0
4
```