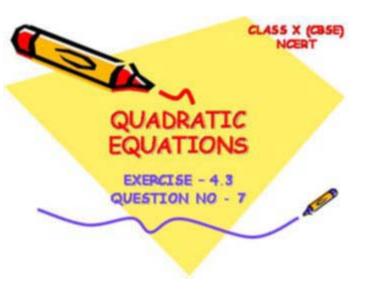# Problem J: Magic Formula

You are given a quadratic function, $f(n) = a \times n^2 + b \times n + c$. You are also given a divisor d and a limit L. How many of the function values $f(0), f(1), ..., f(L)$ are divisible by d?

Input Format

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 Format

Print the answer for each test case (the number of function values $f(0), f(1), ..., f(L)$ 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
```

Martin Müller