

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

