

# Find Digits

## Problem Statement

You are given an integer  $N$ . Find the digits in this number that exactly divide  $N$  (division that leaves 0 as remainder) and display their count. For  $N = 24$ , there are 2 digits — 2 & 4. Both of these digits exactly divide 24. So our answer is 2.

## Note

- If the same number is repeated twice at different positions, it should be counted twice, e.g., For  $N = 122$ , 2 divides 122 exactly and occurs at ones' and tens' position. So for this case, our answer is 3.
- Division by 0 is undefined.

## Input Format

The first line contains  $T$  (number of test cases) followed by  $T$  lines (each containing an integer  $N$ ).

## Constraints

$$1 \leq T \leq 15$$

$$0 < N < 10^{10}$$

## Output Format

For each test case, display the count of digits in  $N$  that exactly divide  $N$  in a separate line.

## Sample Input

```
2
12
1012
```

## Sample Output

```
2
3
```

## Explanation

1. 2 digits in the number 12 divide the number exactly. Digits at tens' place, 1, divides 12 exactly in 12 parts, and digit at ones' place, 2 divides 12 equally in 6 parts.
2. 1 divides 1012 at two places and 2 divides it at one place. Divide by 0 is an undefined behaviour and it will not be counted.

This challenge was a part of [Pragyan 12](#)