Find Digits

HackerRank

An integer d is a *divisor* of an integer n if the remainder of $n \div d = 0$.

Given an integer, for each digit that makes up the integer determine whether it is a divisor. Count the number of divisors occurring within the integer.

Example
$n = 124$

Check whether 1, 2 and 4 are divisors of 124. All 3 numbers divide evenly into 124 so return 3.

$n = 111$

Check whether 1, 1, and 1 are divisors of 111. All 3 numbers divide evenly into 111 so return 3.

$n = 10$

Check whether 1 and 0 are divisors of 10. 1 is, but 0 is not. Return 1.

Function Description

Complete the *findDigits* function in the editor below.

findDigits has the following parameter(s):

- *int n*: the value to analyze

Returns

- *int:* the number of digits in n that are divisors of n

Input Format

The first line is an integer, t, the number of test cases.
The t subsequent lines each contain an integer, n.

Constraints

$1 \leq t \leq 15$
$0 < n < 10^9$

Sample Input

```
2
12
1012
```

Sample Output

```
2
```

```
3
```

Explanation

The number 12 is broken into two digits, 1 and 2. When 12 is divided by either of those two digits, the remainder is 0 so they are both divisors.

The number 1012 is broken into four digits, 1, 0, 1, and 2. 1012 is evenly divisible by its digits 1, 1, and 2, but it is *not* divisible by 0 as division by zero is undefined.