Divisors (D)

Memory limit: 1024 MB Time limit: 4.00 s

Ori Badpun, a know-it-all-dwarf, taunts you with a puzzle: Algorist, eh? Knows all about *divide and conquer*, or *divide et impera*, paradigm, eh? Or perhaps you got it backwards?! How about *impera et divide* or *conquer and divide*? Let a *permutational divisor* of a number N be defined as a proper divisor (i.e., less than N) whose digits are a permutation of the digits of N with leading zeros not allowed. Got it? I will test your skills in T trials. In each, you will get a positive integer N, and you are to tell me how many permutational divisors it has. So, you got it now?

Input

The first line of the input contains the number of test cases T.

Each of the following T lines contains one natural number N, for which the answer needs to be determined.

Output

For each number from the input, print a single integer on a separate line, indicating how many permutational divisors the given number has.

Limits

$1 \leq T \leq 100\,000$, $1 \leq N \leq 10^{18}$.

Examples

Input	Output	Explanation
4	0	Number 370521 is divisible by 123507.
7	0	
31	0	
90	1	
370521		