Lucky Four

Kostya likes the number **4** much. Of course! This number has such a lot of properties, like:

- Four is the smallest composite number;
- It is also the smallest Smith number;
- The smallest non-cyclic group has four elements;
- Four is the maximal degree of the equation that can be solved in radicals;
- There is four-color theorem that states that any map can be colored in no more than four colors in such a way that no two adjacent regions are colored in the same color;
- Lagrange's four-square theorem states that every positive integer can be written as the sum of at most four square numbers;
- Four is the maximum number of dimensions of a real division algebra;
- In bases 6 and 12, 4 is a 1-automorphic number;
- And there are a lot more cool stuff about this number!

Impressed by the power of this number, Kostya has begun to look for occurrences of four anywhere. He has a list of **T** integers, for each of them he wants to calculate the number of occurrences of the digit **4** in the decimal representation. He is too busy now, so please help him.

Input

The first line of input consists of a single integer **T**, denoting the number of integers in Kostya's list.

Then, there are **T** lines, each of them contain a single integer from the list.

Output

Output **T** lines. Each of these lines should contain the number of occurences of the digit **4** in the respective integer from Kostya's list.

Constraints

- **1 ≤ T ≤ 10^5**
- (Subtask 1): **0** ≤ Numbers from the list ≤ **9** - 33 points.
- (Subtask 2): **0** ≤ Numbers from the list ≤ **10^9** - 67 points.

Example

Input:

```
5

447474
228
6664
40
81
```

Output:

401
1
0