

## DIVISIBILITY TASK

You are given a very big number that can have upto 1000 digits. Your task is to report the minimum digits that you should turn to '0' so that the number is divisible by 3.

### INPUT:

first line contains the integer  $T \leq 100$  denoting the number of test cases.

Each test case has only one line of input, a big number in the form of a string.

### OUTPUT:

for every test case output the answer in a new line

### EXAMPLE INPUT:

```
2
123456
112231
```

### EXAMPLE OUTPUT:

```
0
1
```