

## 12895 Armstrong Number

A number  $N$  is an *Armstrong number of order  $n$*  ( $n$  being the number of digits) if

$$abcd\dots = a^n + b^n + c^n + d^n + \dots = N$$

For example, 153 is an Armstrong number of order 3 because

$$1^3 + 5^3 + 3^3 = 1 + 125 + 27 = 153.$$

Likewise, 54748 is an Armstrong number of order 5 because

$$5^5 + 4^5 + 7^5 + 4^5 + 8^5 = 3125 + 1024 + 16807 + 1024 + 32768 = 54748.$$

In this problem you have to determine whether a given number is Armstrong number or not.

### Input

The first line of input is an integer,  $T$  that determines the number of test cases. Each of the next  $T$  lines contain a positive integer  $N$ , where  $N \leq 1000000000$ .

### Output

For each line of input, there will be one line of output. If  $N$  is an Armstrong number print 'Armstrong', otherwise print 'Not Armstrong' (without the quotes).

### Sample Input

```
3
153
2732
54748
```

### Sample Output

```
Armstrong
Not Armstrong
Armstrong
```