

Factoradic

[Wersja polska](#)

[English version](#)

For given number **n** your task is to print [factoradic](#) of **n** in decimal representation.

Input

The first line of the standard input contains one integer **t** ($t < 10001$) which is the number of test cases.

In each of the next **t** lines there is one number **n** ($n < 1000000001$).

Output

For each test, print factoradic of **n** in decimal representation.

Example

Input:

```
6
4600
10000
52608434
395033
1
1000000000
```

Output:

```
6212200
16512200
134861130100
1062342210
10
2105644512200
```