Lucky Numbers

Time Limit 1 second

Description

We define the Lucky Sequence as the infinite sequence of all integers, in ascending order, that can represented as any positive integer power of 5 (i.e 5^k where k is a positive integer) or as a sum of distinct positive integer powers of 5 (i.e 5^a1 + 5^a2 + 5^a3 + ... , where a1, a2, a3, ... are distinct positive integers). All the numbers in the lucky sequence are called lucky numbers. The first few lucky numbers are 5, 25, 30, 125, 130, 150, ... Given **n**, your task is to find the nth lucky number.

Input specification

First line of input contains an integer **t**, **t** ≤ 200, representing the number of test-cases. Then **t** lines follow each containing one integer **n**, 1 ≤ **n** ≤ 8000.

Output specification

For each test case output the nth lucky number on a separate line. Answers will fit in a 32-bit signed integer.

Sample input

```
4
1
2
3
9
```

Sample output

```
5
25
30
630
```