Sicily

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1119. Factstone Benchmark

Total: 3646   Accepted: 1726   Rating: 2.7/5.0(29 votes)   `0 ▾`

Time Limit: 1sec   Memory Limit:32MB

Description

Amtel has announced that it will release a 128-bit computer chip by 2010, a 256-bit computer by 2020, and so on, continuing its strategy of doubling the word-size every ten years. (Amtel released a 64-bit computer in 2000, a 32-bit computer in 1990, a 16-bit computer in 1980, an 8-bit computer in 1970, and a 4-bit computer, its first, in 1960.)

Amtel will use a new benchmark - the *Factstone* - to advertise the vastly improved capacity of its new chips. The *Factstone* rating is defined to be the largest integer n such that $n!$ can be represented as an unsigned integer in a computer word.

Input

Given a year $1960 \le y \le 2160$, what will be the *Factstone* rating of Amtel's most recently released chip?

Output

There are several test cases. For each test case, there is one line of input containing y. A line containing 0 follows the last test case. For each test case, output a line giving the Factstone rating.

Sample Input

Copy

```
1960
1981
0
```

Sample Output

Copy

```
3
8
```

Status   Submit   Source Code