2020

3n + 1 Sequence

RTCP – HANDLE ERRORS SMARTLY – PROBLEM DESCRIPTION

youtube.com/shariftech

3n+1 Sequence

You have to print nth number from a sequence defined as follows:

- start with any integer p (>=0).
- Then each term is obtained from the previous term as follows:
    - if the previous term (p1) is even, the next term(p2) is one half of the previous term (**p2 = p1/2**).
    - If the previous term(p1) is odd, the next term(p2) is 3 times the previous term plus 1 (**p2 = p1*3 + 1**).

So if

```
p = 13

n = 4
```

then the sequence

```
13    40    20    10     5    16     - - - - -
```

And the nth (4th) number from the sequence is 10.

Input:

Only line of input contains two integers p,n (0 <= p <= 10^9) and (1 <= n <= 10^9)

Output:

Print the nth number from the sequence started with p.

Input	Output
4 1	4
4 2	2