

## Problem D

There is an integer  $K$ . You are allowed to add to  $K$  any of its divisors not equal to 1 and  $K$ . The same operation can be applied to the resulting number and so on. Notice that starting from the number 4, we can reach any composite number by applying several such operations. For example, the number 24 can be reached starting from 4 using 5 operations: 4-6-8-12-24.

You will solve a more general problem. Given ints  $N$  and  $M$ , return the minimal number of the described operations necessary to transform  $N$  into  $M$ . Return -1 if  $M$  can't be obtained from  $N$ .

- $N$  will be between 4 and 100000, inclusive.
- $M$  will be between  $N$  and 100000, inclusive.

See examples for input/output format.

D.IN

1

4

24

D.OUT

5