


# Problem B

## Das Blinkenlights

**Problem ID:** dasblinkenlights**CPU Time limit:** 1 second**Memory limit:** 1024 MB**Author:** Greg Hamerly**Source:** 2018 ICPC North American Qualifier Contest**License:** 

There are two lights that blink at regular intervals. When each one blinks, it turns on and then immediately back off; they don't toggle. They are both off at time  $t = 0$ . The first one blinks at  $t = p, 2p, 3p, \dots$  seconds; the second one blinks at  $t = q, 2q, 3q, \dots$  seconds. Once they start, they both keep blinking forever. It is very exciting to see them blink at the same time (on the same second). But your patience is going to run out eventually, in  $s$  seconds. Will they blink at same time between  $t = 1$  and  $t = s$  (inclusive)? Write a program that can answer this question, quick, before they start blinking again!

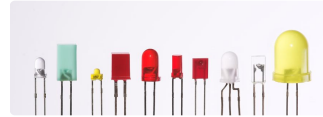
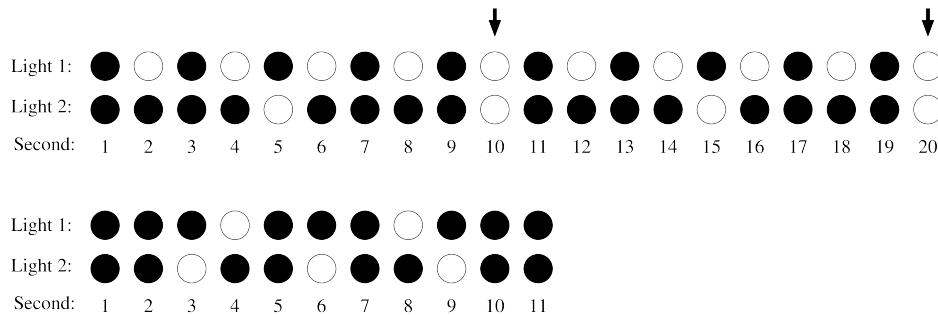


Photo by Afrank99



**Figure 1:** Illustration of the sample inputs. A black circle means the light is off, a white circle means the light blinks at that second. The arrows above point out times when both lights blink.

### Input

Input consists of one line containing three space-separated integers  $p$ ,  $q$ , and  $s$ . The bounds are  $1 \leq p, q \leq 100$  and  $1 \leq s \leq 10\,000$ . The first light blinks every  $p$  seconds, the second every  $q$  seconds. The value of  $s$  represents the maximum number of seconds to consider when determining if the two lights blink at the same time.

### Output

Output yes if the two lights blink on the same second between time 1 and time  $s$ , or no otherwise.

#### Sample Input 1

2 5 20

#### Sample Output 1

yes

#### Sample Input 2

4 3 11

#### Sample Output 2

no