

Objective

Today, we're working with binary numbers. Check out the Tutorial tab for learning materials and an instructional video!

Task

Given a base-10 integer, n , convert it to binary (base-2). Then find and print the base-10 integer denoting the maximum number of consecutive 1's in n 's binary representation. When working with different bases, it is common to show the base as a subscript.

Example

$$n = 125$$

The binary representation of 125_{10} is 1111101_2 . In base 10, there are 5 and 1 consecutive ones in two groups. Print the maximum, 5.

Input Format

A single integer, n .

Constraints

- $1 \leq n \leq 10^6$

Output Format

Print a single base-10 integer that denotes the maximum number of consecutive 1's in the binary representation of n .

Sample Input 1

5

Sample Output 1

1

Sample Input 2

13

Sample Output 2

2

Explanation

Sample Case 1:

The binary representation of 5_{10} is 101_2 , so the maximum number of consecutive 1's is 1.

Sample Case 2:

The binary representation of 13_{10} is 1101_2 , so the maximum number of consecutive 1's is 2.