BF Last binary digit

Your task is to write as short as possible program in Brainf**k which determines the last digit of given number after it's conversion from decimal to binary system.

Input

An integer in decimal system consisting of up to 200 digits. There is a newline character (ASCII 10) after the given number.

Output

One digit (1 or 0) which is the last digit of given number after it's conversion to binary system.

Example

Input:
4372667135165131576213
Output:
1