

1. Strong Prime

In number theory, **Strong Prime** is a prime number **P** which is greater than the arithmetic mean of **PP** and **NP**.

Where

- **PP** is previous_prime of **P**.
- **NP** is next_prime of **P**.

Examples:

P = 17 is a **Strong Prime** as it is greater than arithmetic mean of PP = 13 and NP = 19, which is $(13 + 19) / 2 = 32 / 2 = 16$.

P = 29 is a **Strong Prime** as it is greater than arithmetic mean of PP = 25 and NP = 31, which is $(25 + 31) / 2 = 56 / 2 = 28$.

P = 35 is **Not a Strong Prime** as though it is greater than arithmetic mean of PP = 31 and NP = 37, which is $(31 + 37) / 2 = 68 / 2 = 34$. **35 is not a Prime Number itself.**

Given a number **N** determine if it's **Strong Prime or not**.

Input Format:

The only line of input contains a single number **N**.

Output Format:

Print **YES** if **N** is Strong Prime,
NO otherwise

Constraints:

$1 \leq N \leq 1000000$

Sample I/O:

Input 1:

11

Output 1:

YES

Input 2:

17

Output 2:

YES

Input 3:

13

Output 3:

NO

Input 4:

7

Output 4:

NO

2. Kohli and Coins

Kohli has infinite coins in denominations of rupees 5 and rupees 10.

Find the minimum number of coins Kohli needs, to pay exactly X rupees. If it is impossible to pay X rupees in denominations of rupees 5 and 10 only, print -1.

Sample I/O:**Input Format:**

A single line contains an integer X.

Output Format:

Print the output according to the description.

Input 1:

50

Output 1:

5

Input 2:

15

Output 2:

2

Input3:

8

Output 3:

-1

Input 4:

95

Output 4:

10