1. **World Cup - 2K23**

India is hosting **World Cup - 2K23**. And ***N*** teams are participating in the event. The organizers want to set the fixtures in the following way for the league stage.

Each team plays **exactly 1 match** with other teams.

Find out the total number of matches that can be scheduled.

Input Format:
Only line of input contains a single integer ***N***.

Output Format:
Print the total number of matches that can be scheduled.

Constraints:
$2 \leq N \leq 10000$

Sample I/O:

Input 1:
10
Output 1:
45

Input 2:
2
Output 2:
1

Input 3:
4
Output 3:
6

2. **Collatz Sequnce 2**

Take any positive non-zero integer **N**.

If **N** is even do **N / 2**,
If **N** is odd do **3 * N + 1**.

If we keep on doing the above steps every N, will reach 1 at one point. And the sequence that the number forms to reach 1 is called as **Collatz Sequence**.

Collatz_Chain_Length (C) of **N** is defined as **no. of steps taken by N to reach 1**
In other words **Collatz_Chain_Length (C)** of **N** is nothing but the **numbers of terms in the sequence (excluding N)**

Examples:
If **N** is 3, then the sequence would be

3 10 5 16 8 4 2 1

and **Collatz_Chain_Length (C) of 3** is **7** as it took exactly **7** steps to reach 1.

If **N** is 7, then the sequence would be

7 22 11 34 17 52 26 13 40 20 10 5 16 8 4 2 1

and **Collatz_Chain_Length (C) of 7** is **16** as it took exactly **16** steps to reach 1.

You're given two integers **A** and **B**, find out which number from **A** to **B** (Inclusive) has the **Maximum Collatz_Chain_Length (C)**.

Sample I/O:

Input 1:
1 10
Output 1:
9

Input 2:
11 100
Output 2:
97

Input 3:
1000 2000
Output 3:
1161

Explanation:
Input 1:

Collatz_Chain_Length(1) -> 0
Collatz_Chain_Length(2) -> 1
Collatz_Chain_Length(3) -> 7
Collatz_Chain_Length(4) -> 2
Collatz_Chain_Length(5) -> 5
Collatz_Chain_Length(6) -> 8
Collatz_Chain_Length(7) -> 16
Collatz_Chain_Length(8) -> 3
Collatz_Chain_Length(9) -> 19
Collatz_Chain_Length(10) -> 6
as we can see the number **9** has the **Maximum Collatz_Chain_Length** with 19 terms. So **9** is the answer.