

## Minimum Operations

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### Problems

You are given a number **N**. You have to find the number of operations required to reach **N** from **0**. You have 2 operations available:

- Double the number
- Add one to the number

#### Input:

The first line of input contains an integer **T** denoting the number of test cases. Then **T** test cases follow. Each test case contains an integer **N**.

#### Output:

For each test case, in a new line, print the **minimum** number of operations required to reach **N** from **0**.

#### Constraints:

$1 \leq T \leq 100$

$1 \leq N \leq 10^4$

#### Example:

##### Input:

2  
8  
7

##### Input:

4  
5

#### Explanation:

##### Testcase1:

Input :  $N = 8$

Output : 4

$0 + 1 = 1$ ,  $1 + 1 = 2$ ,  $2 * 2 = 4$ ,  $4 * 2 = 8$

##### Testcase2:

Input :  $N = 7$

Output : 5

$0 + 1 = 1$ ,  $1 + 1 = 2$ ,  $1 + 2 = 3$ ,  $3 * 2 = 6$ ,  $6 + 1 = 7$

**\*\* For More Input/Output Examples Use 'Expected Output' option \*\***

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