

Complement of Base 10 Number

Try to solve the Complement of Base 10 Number problem.

We'll cover the following ^

- Statement
- Examples
- Understand the problem
- Figure it out!
- Try it yourself

Statement

For any n positive number in base 10, return the complement of its binary representation as an integer in base 10.

Constraints

- $0 \leq n \leq 10^9$

Examples

Sample example 1

Input

42

The binary value of 42 is 101010.

1

0

1

0

1

0

32168421

Output

1

0

1

0

1

168421

21

After taking the complement of 101010, we get 10101, which is equivalent to 21.

1 of 3

Sample example 2

Input

8

The binary value of 8 is 1000.

1

0

0

0

8421

Output

1	1	1
---	---	---

4 2 1

7

After taking complement of 1000, we get 0111, which is equivalent to 7.

2 of 3

Sample example 3

Input

100

The binary value of 100 is 1100100.

1	1	0	0	1	0	0
---	---	---	---	---	---	---

64 32 16 8 4 2 1

Output

1	1	0	1	1
---	---	---	---	---

16 8 4 2 1

27

After taking complement of 1100100, we get 0011011, which is equivalent to 27.

3 of 3

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☐

Understand the problem

Let's take a moment to make sure you've correctly understood the problem. The quiz below helps you check if you're solving the correct problem:

Note: The binary complement of each input decimal value is provided for help.

Complement of Base 10 Number

1

What is the correct output if the following value is given as input?

Input = 39

A) 24

B) 39

C) 27

?

Tt

☾

Submit Answer



Question 1 of 3
0 attempted



Reset Quiz ↻

Figure it out!

We have a game for you to play. Rearrange the logical building blocks to develop a clearer understanding of how to solve this problem.



Drag and drop the cards to rearrange them in the correct sequence.

Calculate the number of bits required to store any given positive integer.

Create an all bits set against the number of bits of the input value.

Flip all occurrences of 1s to 0s and 0s to 1s by computing the XOR operation.

Convert the binary value back to base 10 and return the complement.

Reset

Show Solution

Submit

Try it yourself

Implement your solution in the following coding playground:



Java

usercode > main.java

```
1 import java.util.*;
2 public class Main{
3     public static int findBitwiseComplement(int num) {
4         // Write your code here
5         // your code will replace this placeholder return statement
6
7         return -1;
8     }
9 }
```





Submit

Test Cases Results

Case 1

Case 2

Case 3

Input #1

42

Complement of Base 10 Number

← Back

Next →

Solution: Find the Diff...

Solution: Complement...



Mark as
Completed

