

# Problem 1318: Minimum Flips to Make a OR b Equal to c

## Problem Information

Difficulty: Medium

Acceptance Rate: 0.00%

Paid Only: No

## Problem Description

Given 3 positive numbers

a

,

b

and

c

. Return the minimum flips required in some bits of

a

and

b

to make (

a

OR

b

==

c

). (bitwise OR operation).

Flip operation consists of change

any

single bit 1 to 0 or change the bit 0 to 1 in their binary representation.

Example 1:

00 <b>10</b> -> a		000 <b>1</b> -> a
01 <b>10</b> -> b		01 <b>00</b> -> b
-----		-----
0101 -> c		0101 -> c

Input:

a = 2, b = 6, c = 5

Output:

3

Explanation:

After flips a = 1 , b = 4 , c = 5 such that (

a

OR

b

==

c

)

Example 2:

Input:

a = 4, b = 2, c = 7

Output:

1

Example 3:

Input:

a = 1, b = 2, c = 3

Output:

0

Constraints:

$1 \leq a \leq 10^9$

$1 \leq b \leq 10^9$

$1 \leq c \leq 10^9$

## Code Snippets

C++:

```
class Solution {  
public:  
    int minFlips(int a, int b, int c) {  
  
    }  
};
```

### Java:

```
class Solution {  
public int minFlips(int a, int b, int c) {  
  
}  
}
```

### Python3:

```
class Solution:  
    def minFlips(self, a: int, b: int, c: int) -> int:
```

### Python:

```
class Solution(object):  
    def minFlips(self, a, b, c):  
        """  
        :type a: int  
        :type b: int  
        :type c: int  
        :rtype: int  
        """
```

### JavaScript:

```
/**  
 * @param {number} a  
 * @param {number} b  
 * @param {number} c  
 * @return {number}  
 */  
var minFlips = function(a, b, c) {  
  
};
```

**TypeScript:**

```
function minFlips(a: number, b: number, c: number): number {  
}  
};
```

**C#:**

```
public class Solution {  
    public int MinFlips(int a, int b, int c) {  
  
    }  
}
```

**C:**

```
int minFlips(int a, int b, int c){  
  
}
```

**Go:**

```
func minFlips(a int, b int, c int) int {  
  
}
```

**Kotlin:**

```
class Solution {  
    fun minFlips(a: Int, b: Int, c: Int): Int {  
  
    }  
}
```

**Swift:**

```
class Solution {  
    func minFlips(_ a: Int, _ b: Int, _ c: Int) -> Int {  
  
    }  
}
```

**Rust:**

```
impl Solution {  
    pub fn min_flips(a: i32, b: i32, c: i32) -> i32 {  
  
    }  
}
```

**Ruby:**

```
# @param {Integer} a  
# @param {Integer} b  
# @param {Integer} c  
# @return {Integer}  
def min_flips(a, b, c)  
  
end
```

**PHP:**

```
class Solution {  
  
    /**  
     * @param Integer $a  
     * @param Integer $b  
     * @param Integer $c  
     * @return Integer  
     */  
    function minFlips($a, $b, $c) {  
  
    }  
}
```

**Scala:**

```
object Solution {  
    def minFlips(a: Int, b: Int, c: Int): Int = {  
  
    }  
}
```

## Solutions

### C++ Solution:

```
/*
 * Problem: Minimum Flips to Make a OR b Equal to c
 * Difficulty: Medium
 * Tags: general
 *
 * Approach: Optimized algorithm based on problem constraints
 * Time Complexity: O(n) to O(n^2) depending on approach
 * Space Complexity: O(1) to O(n) depending on approach
 */

class Solution {
public:
    int minFlips(int a, int b, int c) {

    }
};
```

### Java Solution:

```
/**
 * Problem: Minimum Flips to Make a OR b Equal to c
 * Difficulty: Medium
 * Tags: general
 *
 * Approach: Optimized algorithm based on problem constraints
 * Time Complexity: O(n) to O(n^2) depending on approach
 * Space Complexity: O(1) to O(n) depending on approach
 */

class Solution {
    public int minFlips(int a, int b, int c) {

    }
}
```

### Python3 Solution:

```
"""
Problem: Minimum Flips to Make a OR b Equal to c
```

Difficulty: Medium

Tags: general

Approach: Optimized algorithm based on problem constraints

Time Complexity:  $O(n)$  to  $O(n^2)$  depending on approach

Space Complexity:  $O(1)$  to  $O(n)$  depending on approach

"""

```
class Solution:

    def minFlips(self, a: int, b: int, c: int) -> int:
        # TODO: Implement optimized solution
        pass
```

## Python Solution:

```
class Solution(object):

    def minFlips(self, a, b, c):
        """
        :type a: int
        :type b: int
        :type c: int
        :rtype: int
        """

```

## JavaScript Solution:

```
/**
 * Problem: Minimum Flips to Make a OR b Equal to c
 * Difficulty: Medium
 * Tags: general
 *
 * Approach: Optimized algorithm based on problem constraints
 * Time Complexity:  $O(n)$  to  $O(n^2)$  depending on approach
 * Space Complexity:  $O(1)$  to  $O(n)$  depending on approach
 */

/**
 * @param {number} a
 * @param {number} b
 * @param {number} c
 * @return {number}
 */
```

```
*/  
var minFlips = function(a, b, c) {  
};
```

### TypeScript Solution:

```
/**  
 * Problem: Minimum Flips to Make a OR b Equal to c  
 * Difficulty: Medium  
 * Tags: general  
 *  
 * Approach: Optimized algorithm based on problem constraints  
 * Time Complexity: O(n) to O(n^2) depending on approach  
 * Space Complexity: O(1) to O(n) depending on approach  
 */  
  
function minFlips(a: number, b: number, c: number): number {  
};
```

### C# Solution:

```
/*  
 * Problem: Minimum Flips to Make a OR b Equal to c  
 * Difficulty: Medium  
 * Tags: general  
 *  
 * Approach: Optimized algorithm based on problem constraints  
 * Time Complexity: O(n) to O(n^2) depending on approach  
 * Space Complexity: O(1) to O(n) depending on approach  
 */  
  
public class Solution {  
    public int MinFlips(int a, int b, int c) {  
        return 0;  
    }  
}
```

### C Solution:

```
/*
 * Problem: Minimum Flips to Make a OR b Equal to c
 * Difficulty: Medium
 * Tags: general
 *
 * Approach: Optimized algorithm based on problem constraints
 * Time Complexity: O(n) to O(n^2) depending on approach
 * Space Complexity: O(1) to O(n) depending on approach
 */
```

```
int minFlips(int a, int b, int c){

}
```

## Go Solution:

```
// Problem: Minimum Flips to Make a OR b Equal to c
// Difficulty: Medium
// Tags: general
//
// Approach: Optimized algorithm based on problem constraints
// Time Complexity: O(n) to O(n^2) depending on approach
// Space Complexity: O(1) to O(n) depending on approach

func minFlips(a int, b int, c int) int {
```

```
}
```

## Kotlin Solution:

```
class Solution {

    fun minFlips(a: Int, b: Int, c: Int): Int {

    }
}
```

## Swift Solution:

```
class Solution {

    func minFlips(_ a: Int, _ b: Int, _ c: Int) -> Int {
```

```
}
```

```
}
```

### Rust Solution:

```
// Problem: Minimum Flips to Make a OR b Equal to c
// Difficulty: Medium
// Tags: general
//
// Approach: Optimized algorithm based on problem constraints
// Time Complexity: O(n) to O(n^2) depending on approach
// Space Complexity: O(1) to O(n) depending on approach

impl Solution {
    pub fn min_flips(a: i32, b: i32, c: i32) -> i32 {
        //
    }
}
```

### Ruby Solution:

```
# @param {Integer} a
# @param {Integer} b
# @param {Integer} c
# @return {Integer}
def min_flips(a, b, c)

end
```

### PHP Solution:

```
class Solution {

    /**
     * @param Integer $a
     * @param Integer $b
     * @param Integer $c
     * @return Integer
     */
    function minFlips($a, $b, $c) {
```

```
}
```

```
}
```

### Scala Solution:

```
object Solution {  
    def minFlips(a: Int, b: Int, c: Int): Int = {  
  
    }  
}
```