

762. Prime Number of Set Bits in Binary Representation (二進位的 1 總數是質數)

傳入 2 個整數 `left` 和 `right`, 找出從 `left` 到 `right` 的整數中 (包括 `left` 及 `right`), 有多少個數字轉成二進位後, 其 1 的個數是質數(除了 1 和自己, 沒有其他數可以整除它).

- 例如, 21 寫成二進位是 10101, 其中 1 有 3 個, 而 3 是質數.

Example 1:

Input: `left = 6, right = 10`

Output: 4

Explanation:

6 -> 110 (2 set bits, 2 is prime)

7 -> 111 (3 set bits, 3 is prime)

8 -> 1000 (1 set bit, 1 is not prime)

9 -> 1001 (2 set bits, 2 is prime)

10 -> 1010 (2 set bits, 2 is prime)

4 numbers have a prime number of set bits.

Example 2:

Input: `left = 10, right = 15`

Output: 5

Explanation:

10 -> 1010 (2 set bits, 2 is prime)

11 -> 1011 (3 set bits, 3 is prime)

12 -> 1100 (2 set bits, 2 is prime)

13 -> 1101 (3 set bits, 3 is prime)

14 -> 1110 (3 set bits, 3 is prime)

15 -> 1111 (4 set bits, 4 is not prime)

5 numbers have a prime number of set bits.

Constraints:

- $1 \leq \text{left} \leq \text{right} \leq 10^6$
- $0 \leq \text{right} - \text{left} \leq 10^4$