

1. Factors of 3 and 5

An ideal number is a positive integer that has only 3 and 5 as prime divisors. An ideal number can be expressed in the form of $3^x \times 5^y$, where x and y are non-negative integers. For example, 15, 45 and 75 are ideal numbers but 6, 10, and 21 are not.

Find the number of ideal integers within the given segment $[low, high]$ inclusive.

Example

$low = 200$

$high = 405$

Power	of 3	of 5
0	1	1
1	3	5
2	9	25
3	27	125
4	81	625
5	243	3125
6	729	15625

There are 4 ideal integers in the range $[200, 405]$ inclusive :

$$3^2 * 5^2 = 9 * 25 = 225$$

$$3^5 * 5^0 = 243 * 1 = 243$$

$$3^1 * 5^3 = 3 * 125 = 375$$

$$3^4 * 5^1 = 81 * 5 = 405$$

Function Description

Complete the function *getIdealNums* in the editor below. The function returns the number of *ideal* integers in the inclusive range.

getIdealNums has the following parameter(s):

int low: an integer, the lower range limit,
inclusive

int high: an integer, the upper range limit, inclusive

Constraints

- $1 \leq low \leq high \leq 2 \times 10^9$

Input Format For Custom Testing

Sample Case 0

Sample Input For Custom Testing

STDIN	Function
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1 →	low = 1
1 →	high = 1

Sample Output

1

Explanation

There is only 1 ideal integer in $[1, 1]$ that can be expressed as $3^x 5^y$: $1 = 3^0 5^0$.

Sample Case 1

Sample Case 2