Cool Numbers

Eric likes interesting numbers like 64. It turns out that 64 is both a square and a cube, since 64 = 8^2 and 64 = 4^3 . Eric calls these numbers cool.

Write a program that helps Eric figure out how many integers in a given range are cool.

Input

On the first line of input, you are given an integer a such that a ≥ 1 and a ≤ 10^8 . On the second line of input, you are given an integer b such that a ≤ b and b ≤ 10^8 .

Output

The output should be the number of cool numbers in the range a to b (inclusively: that is, a and b would count as cool numbers in the range if they were actually cool).

Example

Input:
1
100

Output:
2

Input:
100
1000

Output:
1