

Let us begin with a positive integer **N** and find the **smallest** positive integer which **doesn't divide N**. If we repeat the procedure with the resulting number, then again with the new result and so on, we will eventually obtain the number 2 (two). Let us define **strength(N)** as the length of the resulting sequence.

For example, for **N = 6** we obtain the sequence 6, 4, 3, 2 which consists of 4 numbers, thus **strength(6) = 4**.

Given two positive integers **A < B**, calculate the sum of strengths of all integers between **A** and **B** (inclusive), that is,

$$\text{strength}(\mathbf{A}) + \text{strength}(\mathbf{A} + 1) + \dots + \text{strength}(\mathbf{B}).$$

INPUT

The first and only line of input contains two positive integers, **A** and **B** ($3 \leq \mathbf{A} < \mathbf{B} < 10^{17}$).

OUTPUT

The first and only line of output should contain the requested sum of strengths.

SAMPLE TESTS

input	input
3 6	100 200
output	output
11	262