

Project Euler #73: Counting fractions in a range

Problem Statement

This problem is a programming version of [Problem 73](#) from [projecteuler.net](#)

Consider the fraction, $\frac{n}{d}$, where n and d are positive integers. If $n < d$ and $GCD(n, d) = 1$, it is called a reduced proper fraction.

If we list the set of reduced proper fractions for $d \leq 8$ in ascending order of size, we get:

$$\frac{1}{8}, \frac{1}{7}, \frac{1}{6}, \frac{1}{5}, \frac{1}{4}, \frac{2}{7}, \frac{1}{3}, \frac{3}{8}, \frac{2}{5}, \frac{3}{7}, \frac{1}{2}, \frac{4}{7}, \frac{3}{5}, \frac{5}{8}, \frac{2}{3}, \frac{5}{7}, \frac{3}{4}, \frac{5}{6}, \frac{6}{7}, \frac{7}{8}$$

It can be seen that there are 3 fractions between $\frac{1}{3}$ and $\frac{1}{2}$.

How many fractions lie between $\frac{1}{A+1}$ and $\frac{1}{A}$ in the sorted set of reduced proper fractions with denominator less than or equal to D ?

Constraints

$$1 < D < 2 \times 10^6$$

$$1 < A \leq 100$$

Input Format

The only line of input contains A and D .

Output Format

Output required number of fractions.

Sample Input

2 8

Sample Output

3