Problem J
An Idea of Mr. A

Input File: J.IN
Output File: standard output
Program Source File: J.C, J.CPP, J.JAVA

Mr. A proposes to his son the following problem:

"Consider two integers $\boldsymbol{n_1}$ and $\boldsymbol{n_2}$ such that $\boldsymbol{1 \le n_1 < n_2 \le 10^4}$. Using the function $\boldsymbol{p}: \mathbb{N}^* \to \mathbb{N}^*, \boldsymbol{p(n)} = \boldsymbol{2^n}, \forall \boldsymbol{n} \in \mathbb{N}^*$ (where $\mathbb{N}^*$ is the set of positive integers) we define the set

$$\boldsymbol{S(n_1, n_2)} = \{\boldsymbol{p(p(n))} + \boldsymbol{1} \mid \boldsymbol{n_1 \le n \le n_2}\}$$

We also define a set of pairs as follows:

$$\boldsymbol{T(n_1, n_2)} = \{(\boldsymbol{m_1, m_2}) \mid \boldsymbol{m_1, m_2} \in \boldsymbol{S(n_1, n_2)}, \boldsymbol{m_1 < m_2}\}$$

Consider the formula:

$$\boldsymbol{R(n_1, n_2)} = \sum_{(\boldsymbol{m_1, m_2}) \in \boldsymbol{T(n_1, n_2)}} \mathbf{gcd}(\boldsymbol{m_1, m_2})$$

where $\mathbf{gcd}(\boldsymbol{m_1, m_2})$ is the greatest common divisor of $\boldsymbol{m_1}$ and $\boldsymbol{m_2}$. The problem asks to find the number $\boldsymbol{R(n_1, n_2)}$."

Solve the problem proposed by Mr. A.

Input
The input file consists of a single line having the values for n_1 and n_2, separated by exactly one space.

Output
For each test, the result will be written to standard output and consists of the value of $\boldsymbol{R(n_1, n_2)}$.

Sample input	Sample output
1 34	561
15 147	8778
125 1000	383250