Special matrix.

XBITS

The problem:

You have an N x M matrix, where 1 to N are rows and 1 to M are columns.
Element at the intersection of ¿th row and th column is equal to F(i+j),
where F(x) is equal to the number of prime divisors of x.
Determine the sum of all the elements of the matrix.

Input:

The first line contains an integer T denoting the number of test cases. For each test case,
the first line contains two space-separated integers N, M.

Output:

For each test case, print the sum of all the elements of the matrix in a new line.

Example:

Thanks and best wishes,

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Constraints:

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$$1 \leq T \leq 10$$
$$1 \leq N, M \leq 10^6$$

Explanation:

The matrix and the corresponding values are:

$$\begin{bmatrix} F(2) & F(3) & F(4) \\ F(3) & F(4) & F(5) \\ F(4) & F(5) & F(6) \end{bmatrix} = \begin{bmatrix} 1 & 1 & 1 \\ 1 & 1 & 1 \\ 1 & 1 & 2 \end{bmatrix}$$

Hence, the sum of all the elements is *10.*

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