Problem I. Sky Garden

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	1024 megabytes

Prof. Du and Prof. Pang plan to build a sky garden near the city of Allin. In the garden, there will be a plant maze consisting of straight and circular roads.

On the blueprint of the plant maze, Prof. Du draws n circles indicating the circular roads. All of them have center $(0, 0)$. The radius of the i-th circle is i.

Meanwhile, Prof. Pang draws m lines on the blueprint indicating the straight roads. All of the lines pass through $(0, 0)$. Each circle is divided into $2m$ parts with equal lengths by these lines.

Let Q be the set of the $n + m$ roads. Let P be the set of all intersections of two different roads in Q. Note that each circular road and each straight road have two intersections.

For two different points $a \in P$ and $b \in P$, we define $dis(\{a, b\})$ to be the shortest distance one needs to walk from a to b along the roads. Please calculate the sum of $dis(\{a, b\})$ for all $\{a, b\} \subseteq P$.

Input

The only line contains two integers n, m $(1 \leq n, m \leq 500)$.

Output

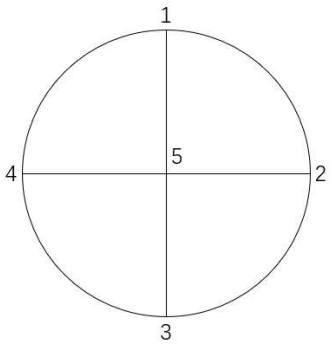
Output one number – the sum of the distances between every pair of points in P.

Your answer is considered correct if its absolute or relative error does not exceed 10^{-6}.

Examples

standard input	standard output
1 2	14.2831853072
2 3	175.4159265359

Note



$dis(p_1, p_2) = dis(p_2, p_3) = dis(p_3, p_4) = dis(p_1, p_4) = \frac{\pi}{2}$

$dis(p_1, p_5) = dis(p_2, p_5) = dis(p_3, p_5) = dis(p_4, p_5) = 1$

$dis(p_1, p_3) = dis(p_2, p_4) = 2$