Problem E - N1nja vs F0x

It’s not too often that you see a N1nja and a F0x together, but even more rare is the opportunity to see them annoying each other! One hilarious way that they annoy the other is by blowing soap bubbles into the other’s face. It’s a competition of skill, dexterity, and determination: which will be the champion windbag?

The N1nja and F0x compete with each other by blowing bubbles at the other; they take turns with the N1nja going first (hax). They begin with a shared total amount of liquid soap $N$. During a turn, a player chooses to take an integer amount of liquid soap $i$ no more than $S$, and blows as many bubbles of any integer radius $R$ that they choose, perhaps even multiple different sized bubbles on the same turn. When they blow a bubble of radius $R$, they use up liquid soap equal to the surface area ($4\pi R^2$) and acquire points equal to the volume ($\frac{4}{3}\pi R^3$). Any remaining soap not used on a given turn is wasted (so after a turn where $i$ soap was chosen, there will be $N - i$ units of soap left), and obviously the surface area of the bubbles that are blown on a single turn totals less than $S$.

Surely the N1nja cannot lose this game. But by how much does the N1nja win?

**Input Specification:**

The input consists of a series of test cases, one per line. Each line contains two positive integers, $N \leq 31337$, the total amount of soap, and $S \leq 1337$, $S \leq N$, the maximum amount usable in a single turn. Input ends on EOF.

**Output Specification:**

For each test case output a single number on its own line, rounded to 5 decimal places: the amount of extra points the N1nja can win if both players play optimally.

**Sample Input:**

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16 15
247 55
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**Sample Output:**

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4.18879
8.37758
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