Softuniada 2019

Tri-Force

The TriForce is specific figure, formed by generating all possible triangles in a specific circle. You have been tasked to generate a TriForce by given parameters.

You will be given a **P** – a **perimeter** and a **R** – a **radius** of **circle**. Generate the sides of **all possible triangles** inscribed in a circle with the given **R** which have a **perimeter equal** to the **given one**.

NOTE: Consider only **integer** sides.

NOTE: A triangle with sides – a = 10, b = 12, c = 5, should be considered different from a triangle with sides a = 5, b = 12, c = 10.

NOTE: Generating should always be done from the side with the greatest possible value. See the examples for more info.

Input

The input will consist of 2 lines:

- On the **first** input line you will receive **P** – the **perimeter**.
- On the **second** input line you will receive **R** – the **radius** of the **circle**.

Output

The output will consist of several lines:

- As output you must print all possible triangles, following the rules above, in the following format:

  `{a}.{b}.{c}`

Constraints

- The perimeter **P** will be an integer (naturally, if all sides are integers) in **range [0, 30000]**.
- The radius **R** will be a floating-point number in **range [0, 15000]**.
- Allowed time / memory: 100ms / 16MB.

Examples

Input	Output
12 2.5	5.4.3 5.3.4 4.5.3 4.3.5 3.5.4 3.4.5
30 6.5	13.12.5 13.5.12

	12.13.5 12.5.13 5.13.12 5.12.13