Problem 1. Resurrection

You ever heard of Phoenixes? Magical Fire Birds that are practically immortal – they reincarnate from an egg when they die. Naturally, it takes time for them to reincarnate. You will play the role of a scientist who calculates the time to reincarnate for each phoenix, based on its body parameters.

You will receive **N**, an **integer** – the **amount** of **phoenixes**.
For each **phoenix**, you will **receive 3 input lines**:

- On the **first input line** you will receive an **integer** – the **total length** of the **body** of the phoenix.
- On the **second input line** you will receive a **floating-point number** – the **total width** of the **body** of the phoenix.
- On the **third input line** you will receive an **integer** – the **length** of **1 wing** of the phoenix.

For each phoenix, you must **print** the **years** it will take for it to **reincarnate**, which is **calculated** by the following formula:

The **`totalLength` powered** by **2**, **multiplied** by the **sum of the `totalWidth`** and the **`totalWingLength`** (**`2 * wingLength`**).

```
totalYears = {totalLength} ^ 2 * ({totalWidth} + 2 * {wingLength})
```

Input

- On the **first input line** you will receive **N**, an **integer** – the **amount** of **phoenixes**.
- On the **next N * 3 input lines** you will be receiving **data** for **each phoenix**.

Output

- As output, you must print the **total years needed for reincarnation** for each phoenix.
- Print each phoenix's years **when you've calculated** them.
- Print each phoenix's years **on a new line**.

Constrains

- The **amount** of **phoenixes** will be an **integer** in **range [0, 1000]**.
- The **total length** of the **body** of the **phoenix** will be an **integer** in **range [-2^{31}, 2^{31}]**.
- The **total width** of the **body** of the **phoenix** will be a **floating-point number** in **range [-2^{31}, 2^{31}]**.
- The **total width** of the **body** of the **phoenix** will have up to **20 digits** after the **decimal point**.
- The **total length** of the **wing** of the **phoenix** will be an **integer** in **range [-2^{31}, $2^{31} - 1$]**.
- The **total years** is a **product** of **integers** and **floating-point numbers**, thus it is a **floating-point number**.
- The **total years** should have the **same accuracy** as the **total width**.
- Allowed working time / memory: **100ms / 16MB**.

Examples

Input	Output	Comments
2 100 50 30 150 25 10	1100000 1012500	**2 phoenixes:** **P1:** Body length: 100 Body width: 50 Length of 1 wing: 30 Total years: 100 ^ 2 * (50 + 2 * 30) = 1100000

		P2: Body length: 150 Body width: 25 Length of 1 wing: 10 Total years: 150 ^ 2 * (25 + 2 * 10) = 1012500
2 100 50.243 31 154 23.132 11	1122430.000 1070350.512	**2 phoenixes:** **P1**: Body length: 100 Body width: 50.243 Length of 1 wing: 31 Total years: 100 ^ 2 * (50.243 + 2 * 31) = 1122430.000 **P2**: Body length: 154 Body width: 23.132 Length of 1 wing: 11 Total years: 154 ^ 2 * (23.132 + 2 * 11) = 1070350.512