

## Step-by-step:

1. In your code:

`1 / 2`

both `1` and `2` are `int` literals.

2. When both operands are `int`, Java uses **integer division** — it drops any fractional part, it doesn't round.

So:

`1 / 2` → `0.5` → fractional part removed → `0`

3. Now, when you multiply:

`0 * 1 * h` → always `0`

## Why Java does this

Java is strongly typed — the type of the result is determined by the types of the operands.

- `int / int` → `int`
- `double / int` → `double`
- `int / double` → `double`

If both are integers, you never get a decimal result — it's truncated toward zero.

## Fix:

Make one of them `double`:

```
System.out.println(0.5 * 1 * h); // double literal
System.out.println((1.0 / 2) * 1 * h);
// force double division
System.out.println((1 * h) / 2.0); // also works
```

If you like, I can show you **how Java decides the result type** in these expressions step-by-step, from compiler parsing to execution. That'll make the "why zero" crystal clear.