

# Experiment ‘p5\_1\_b\_average’ Results

December 18, 2025

**Experiment outcome:** SUCCESS

**Bad responses:** 0

**Responses containing assume :** 0

**Resolution attempts:** 1

**Hard fails (resolution):** 0

**Soft fails (resolution):** 0

**Verification attempts:** 1

## Problem Specification

**Problem name:** p5\_1\_b\_average

**Natural language statement:** Write a method that returns the average of the arguments.

**Method signature:** p5\_1\_b\_average(x: real, y: real, z: real) returns (average: real)

### Ensures

- $\text{average} == (x + y + z) / 3.0$

## GenAI interactions

Below you will find all interactions between the ‘user’ (program) and the ‘assistant’ (OpenAI).

### Program → GenAI

You are given the following task to perform in Dafny:

Write a method that returns the average of the arguments.

The signature should be:

```
method p5_1_b_average(x: real, y: real, z: real) returns (average: real)
```

The method should respect the following contract:

```
ensures average == (x + y + z) / 3.0
```

Produce and show only the Dafny body of this method, including the curly braces that  
→ surround it. Do not show the signature nor contract. You must not use 'assume'  
→ anywhere in your code.

### GenAI → Program

**System fingerprint:**

**ID:** chatcmpl-Co4tRL42yJrMujNsaY4WLOTc08DCo

**Model:** gpt-5.1-chat-latest

**Created at:** 1766051245

**Finish reason:** stop

**Usage:** 274 tokens in, and 37 tokens out

```
{  
  average := (x + y + z) / 3.0;  
}
```

## Final Program

```
method p5_1_b_average(x: real, y: real, z: real) returns (average: real)  
  ensures average == (x + y + z) / 3.0  
{  
  average := (x + y + z) / 3.0;  
}
```

## Total Token Usage

**Input tokens:** 274

**Output tokens:** 37

**Reasoning tokens:** 0

**Sum of ‘total tokens’:** 311

## Experiment Timings

**Overall Experiment** started at 1766051247119, ended at 1766051250130, lasting 3011ms (3.01 seconds)

**Iteration #1** started at 1766051247119, ended at 1766051250130, lasting 3011ms (3.01 seconds)