

Experiment 'P_2_4_2_difference' 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: P_2_4_2_difference

Natural language statement: Write a method that takes two integers and then returns the difference.

Method signature: difference(x: int, y: int) returns (result:int)

Ensures

- `result == x - y`

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 takes two integers and then returns the difference.

The signature should be:

method difference(x: int, y: int) returns (result:int)

The method should respect the following contract:

ensures result == x - y

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-Co4P5w77Kw9r97sNwzn9qVR3oefkB

Model: gpt-5.1-chat-latest

Created at: 1766049363

Finish reason: stop

Usage: 240 tokens in, and 28 tokens out

```
{  
  result := x - y;  
}
```

Final Program

```
method difference(x: int, y: int) returns (result:int)  
  ensures result == x - y  
{  
  result := x - y;  
}
```

Total Token Usage

Input tokens: 240

Output tokens: 28

Reasoning tokens: 0

Sum of ‘total tokens’: 268

Experiment Timings

Overall Experiment started at 1766049364838, ended at 1766049367953, lasting 3115ms (3.12 seconds)

Iteration #1 started at 1766049364839, ended at 1766049367953, lasting 3114ms (3.11 seconds)