

# Experiment ‘2\_4\_7\_min’ 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:** 2\_4\_7\_min

**Natural language statement:** Write a method that takes two integers and then returns the minimum (the smaller of the two).

**Method signature:** min(x: int, y: int) returns (result:int)

### Ensures

- `result == x || result == y`
- `if x <= y then result == x else result == 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 minimum (the smaller of the ↪ two).

The signature should be:

```
method min(x: int, y: int) returns (result:int)
```

The method should respect the following contract:

```
ensures result == x || result == y, ensures if x <= y then result == x else result == 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:** chatmpl-Co4PNPXWZTgsadbxy5Kn6koWPMfZ

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

**Created at:** 1766049381

**Finish reason:** stop

**Usage:** 284 tokens in, and 111 tokens out

```
{  
    if x <= y {  
        result := x;  
    } else {  
        result := y;  
    }  
}
```

### Final Program

```
method min(x: int, y: int) returns (result:int)  
    ensures result == x || result == y  
    ensures if x <= y then result == x else result == y  
{  
    if x <= y {  
        result := x;  
    } else {  
        result := y;
```

}

## Total Token Usage

**Input tokens:** 284

**Output tokens:** 111

**Reasoning tokens:** 64

**Sum of ‘total tokens’:** 395

## Experiment Timings

**Overall Experiment** started at 1766049383421, ended at 1766049386638, lasting 3217ms (3.22 seconds)

**Iteration #1** started at 1766049383421, ended at 1766049386638, lasting 3217ms (3.22 seconds)