

Experiment ‘2_6_convert’ 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_6_convert

Natural language statement: Write a method that takes a measurement in meters and then converts it to miles, feet, and inches.

Method signature: convert(x: real) returns (miles: real, feet: real, inches: real)

Ensures

- `x / 0.000621371 == miles`
- `x / 3.28084 == feet`
- `x / 39.3701 == inches`

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 a measurement in meters and then converts it to miles, feet,
↪ and inches.

The signature should be:

```
method convert(x: real) returns (miles: real, feet: real, inches: real)
```

The method should respect the following contract:

```
ensures x / 0.000621371 == miles, ensures x / 3.28084 == feet, ensures x / 39.3701 ==  
↪ inches
```

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-Co4PRfsmbq1BnJSanMHjkeqduG3qs

Model: gpt-5.1-chat-latest

Created at: 1766049385

Finish reason: stop

Usage: 322 tokens in, and 121 tokens out

```
{  
  miles := x / 0.000621371;  
  feet := x / 3.28084;  
  inches := x / 39.3701;  
}
```

Final Program

```
method convert(x: real) returns (miles: real, feet: real, inches: real)  
  ensures x / 0.000621371 == miles  
  ensures x / 3.28084 == feet  
  ensures x / 39.3701 == inches  
{  
  miles := x / 0.000621371;  
  feet := x / 3.28084;  
  inches := x / 39.3701;  
}
```

Total Token Usage

Input tokens: 322

Output tokens: 121

Reasoning tokens: 64

Sum of 'total tokens': 443

Experiment Timings

Overall Experiment started at 1766049387283, ended at 1766049392751, lasting 5468ms (5.47 seconds)

Iteration #1 started at 1766049387283, ended at 1766049392750, lasting 5467ms (5.47 seconds)