

Exercise 3

Passing OHM editor

Code:

```
Program {  
  Exp = Sum  
  Sum = Product (("+" | "-") Product)*  
  Product = Value (("*" | "/" ) Value)*  
  Value = Number  
         | identifier  
  Number = digit+  
  identifier = letter (letter | digit)*  
}
```

URL: <https://replit.com/@MattMartel/mathgrammer#index.js>

Added test cases

The screenshot shows the OHM editor interface with the following components:

- Grammar:** A text area containing the grammar rules for a simple arithmetic language.
- Test Cases:** A list of example expressions to be tested against the grammar.
- Parse Tree:** A visual representation of the parse tree for the expression "1 0 + 2".
- Options:** A small panel at the bottom right with checkboxes for "Explain parse" and "Show spaces".

Grammar:

```
Program {  
  Exp = Sum  
  Sum = Product (("+" | "-") Product)*  
  Product = Value (("*" | "/" ) Value)*  
  Value = Number  
         | identifier  
  Number = digit+  
  identifier = letter (letter | digit)*  
}
```

Test Cases:

- 3 + 5
- x * 2
- 10 - 4 + 2
- 3 * * 5
- + 3
- 10+2

Parse Tree:

The parse tree for the expression "1 0 + 2" is shown. The root node is "Exp", which has two children: "Sum" and "spaces end". The "Sum" node has two children: "Product" and "+". The "Product" node has two children: "Value" and "Product". The "Value" node has two children: "Number" and "digit". The "Number" node has two children: "1" and "0". The "digit" node has two children: "2".

Options:

- ☐ Explain parse
- ☒ Show spaces