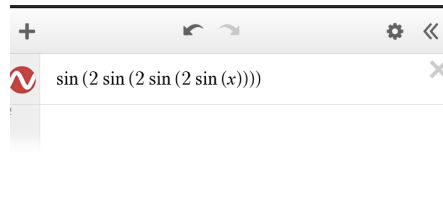


§ Homework Selection

§ Graphing Calculator

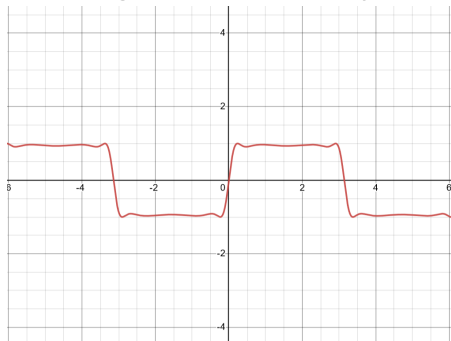
What I will make is a Graphing Calculator similar to [Desmos](#). Several things to mention are: For the Swing-based GUI:

- User will input the expression into the box similar to these examples:
 $x^{(2/3)} + 0.9(3.3 - x^2)^{(1/2)} \sin(10\pi x)$ $x^{(2/3)} + 0.9(3.3 - x^2)^{(1/2)} \sin(10\pi x)$



$\cos(3x) + \sin(x^2)$ $\sin(2\sin(2\sin(2\sin(x))))$

- The program will display the function on the right using Graphics class:



- For the parsing of the expression no external libraries will be used:
 - Lexer
 - Parser
 - Evaluator Will be implemented in the code.

For the Collection Framework:

- It will be everywhere.
- Primarily the stack will be used extensively in the creation of Parser.

For the Serialization: - You will be able to save the state of the program into files.
- You can reopen different projects you have done.

Unit tests (JUnit): - I am not sure yet but it will probably be for testing that the parsing of the expression is right.