

## First “Symbolic calculator” Group Submission

After several days of continuous work, we haven’t been able to handle all the “common case” expressions. We believe we’re close to the solution, but due to time constraints it was deemed best to explain what our program is capable of handling.

Our design uses polymorphism with a base type called Number. Rational, log, Pi\_or\_nthroot, and “Exception” [should be renamed “Expression”] all inherit methods from the base class Number. The Calculate method handles operations on the different Number types. We attempted to make our code as modular as possible, but ended with having to try working in code for specific use cases [such as FOILing].

The design would have really benefitted from having the “exception” class take in two Number\* objects and a char operator. This would have allowed for many expressions that didn’t have a specific way of being operated on, such as  $[(3+\pi)+3]$ . Our plan for resubmission is to handle all functionality using more generalized code. The code became long and more difficult to debug, so the next submission will also focus on streamlining methods.