

Working with CFGs: Arithmetic Expressions.

I give the students a standard set of productions that generate normal infix expressions involving the four basic operations in the usual manner:

- All four operations are normally performed left-to-right unless overridden by parentheses.
- Multiplication and division have precedence over addition and subtraction

We spend a lecture discussing the roles of productions to implement left-to-right operations and the application of non-terminal symbols to implement precedence of operations.

They are asked to add exponentiation (\wedge) to the productions where exponentiation has precedence over the other four operations and exponentiation is performed right-to-left.