

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 (^) to the productions where exponentiation has precedence over the other four operations and exponentiation is performed right-to-left.