

Today HW03 due. Catch-up; mini-review of Ch. 0–4.

Next class *Midterm exam 1.*

1. List the members of your group below. Underline your name.
2. Consider the the grammar G_1 :

$$E \rightarrow E+T \mid E-T \mid T$$

$$F \rightarrow (E) \mid i$$

$$T \rightarrow F \mid T/F \mid T*F$$

For each of the following strings, either provide a leftmost derivation of the string from S or explain why the string is not in $L(G_1)$: $i+i+i/i*i$; $i-ii*i$.

3. Is the grammar G_1 ambiguous? Are its parse trees consistent with the usual interpretation of arithmetic symbols and expressions? Justify your answers.
4. Convert the grammar G_1 of Question 2 to Chomsky normal form. Show intermediate grammars.

[additional space for answering the earlier question]

5. Provide informal and formal descriptions of a pushdown automaton that is equivalent to the grammar G_1 of Question 2.