

Mini Quiz 4

Name: _____

Kerberos: _____

Q: Consider the language below (with start symbol E). Write a grammar that accepts the same languages, but is unambiguous, is left-associative for $=$ and $+$, and right-associative for $?:$, and has precedence:

$?:$ lower than $=$ lower than $+$

$E ::= E ? E : E \mid E \text{ OP } E \mid (E) \mid I$

$\text{OP} ::= = \mid +$

$I ::= 1 \mid 2 \mid 3 \mid 4$

$E ::= E_0$

$E_0 ::= E_1 ? E_0 : E_0 \mid E_1$

$E_1 ::= E_1 = E_2 \mid E_2$

$E_2 ::= E_2 + E_3 \mid E_3$

$E_3 ::= I \mid (E)$