Checkin 12

Describe the difference between an LL(1) and LR(1) parser. Which is more powerful?

Administrivia

P3 Due next week

Flipped Wednesday

Written Work #3

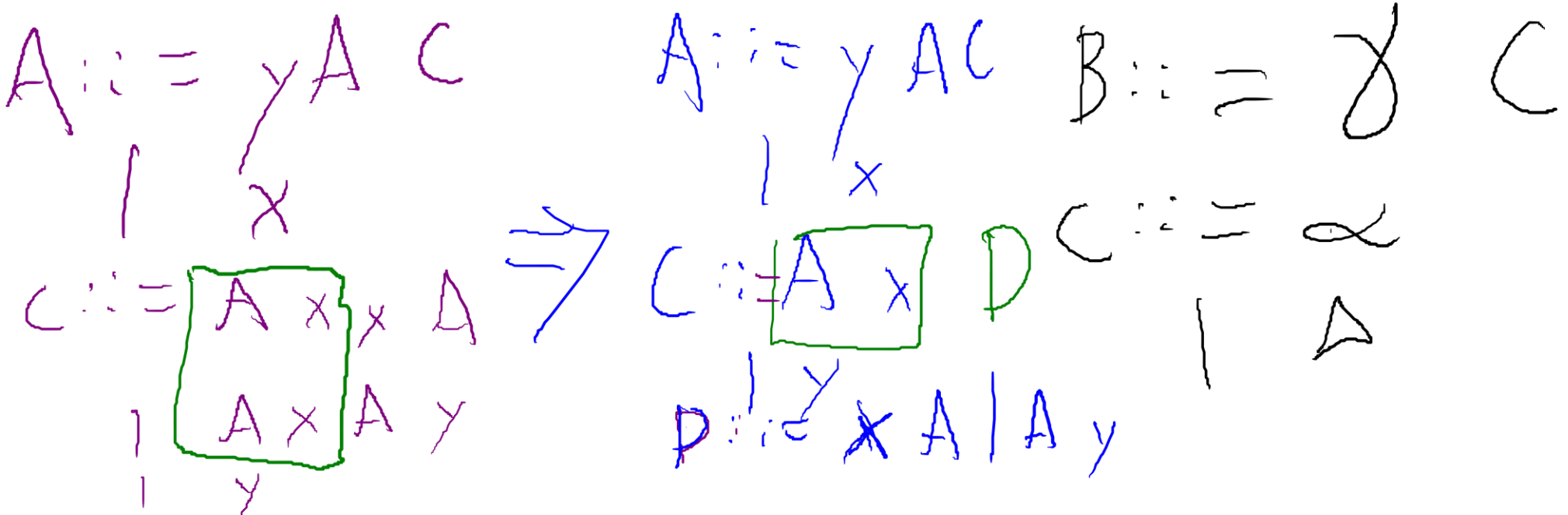
Topics:

- LL(1) Grammars

Question 1

Left factor the following grammar

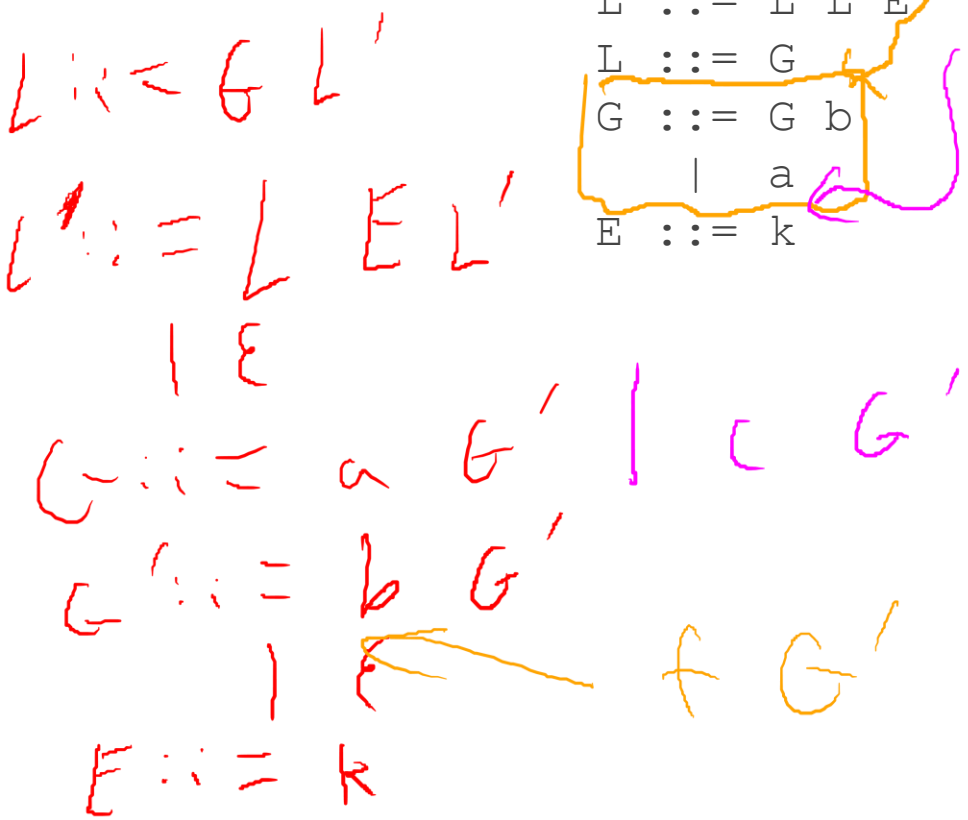
```
A ::= yAAxxA
    | yAAxAy
    | yAy
    | x
```

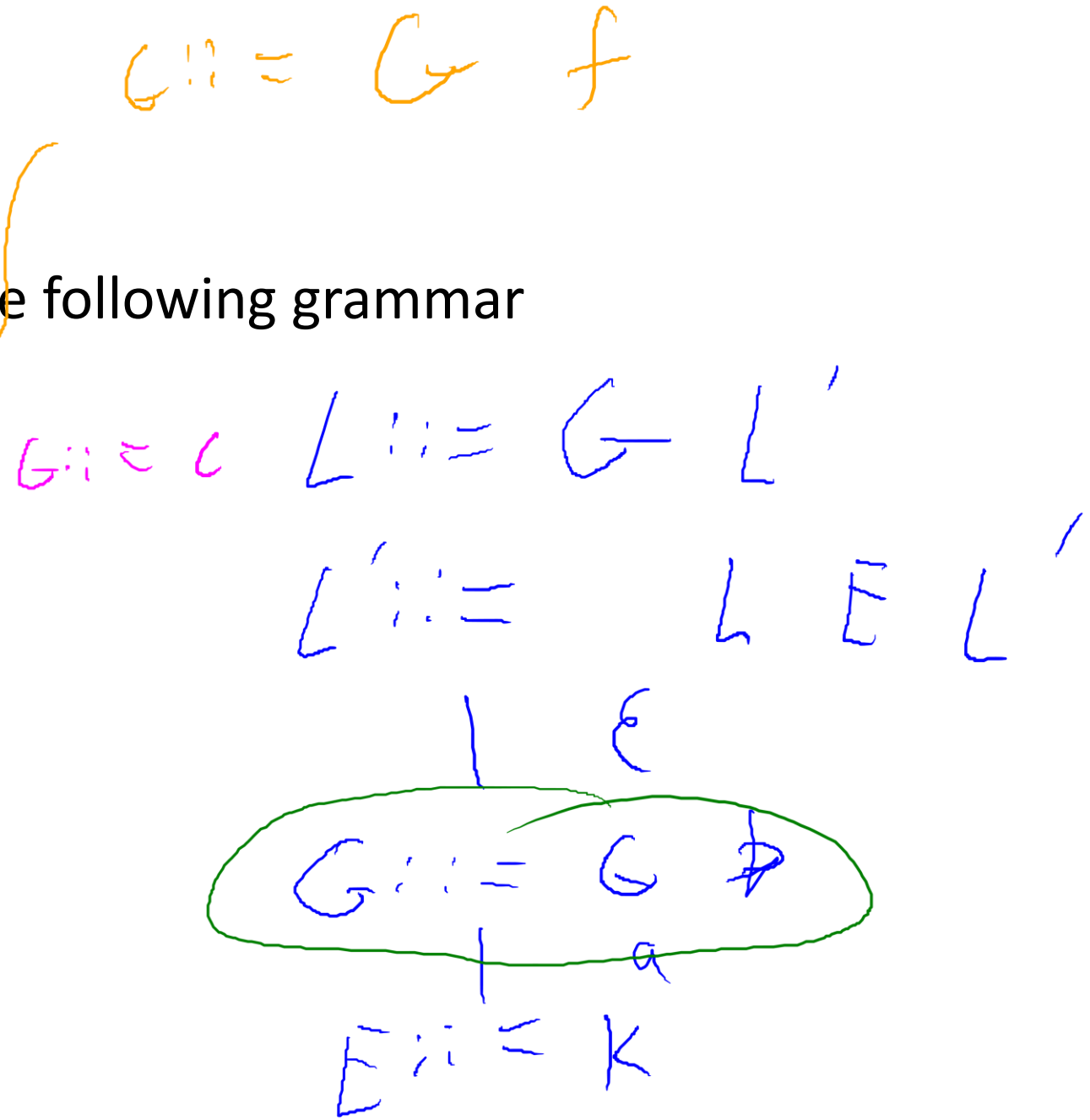


Question 2

Eliminate left recursion in the following grammar

```
L ::= L L E
L ::= G
G ::= G b
    | a
E ::= k
```

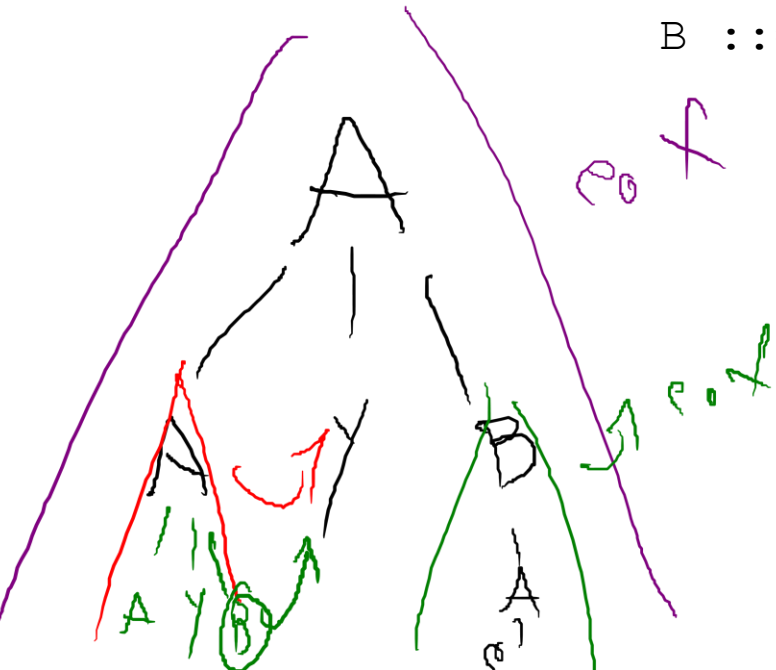




Question 3

What are the FIRST and FOLLOW sets for the following grammar

```
A ::= A y B
A ::= z
A ::= ε
B ::= A
```



FIRST(A) {z, ε, y}

FIRST(B) {z, ε, y}

FOLLOW(A) {eof, y}

FOLLOW(B) {eof, y}

FIRST(A y B) {z, ε, y}

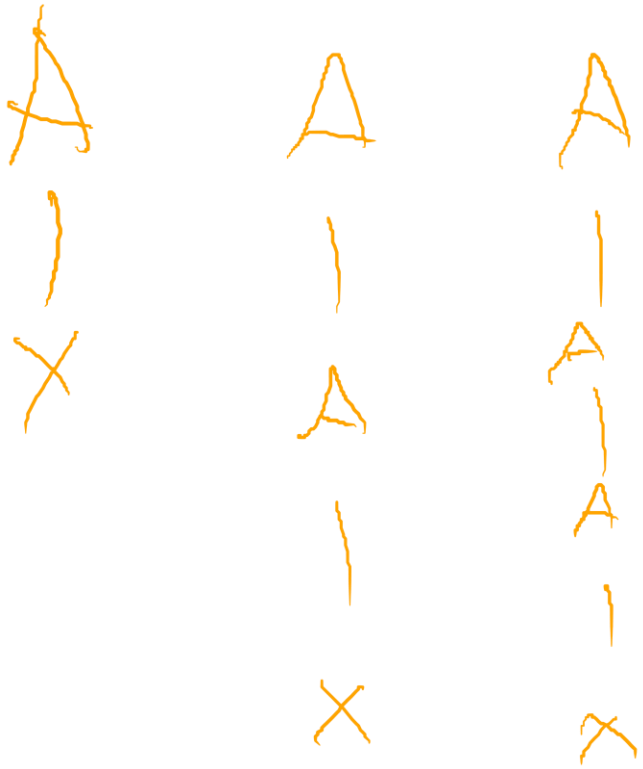
FIRST(z) {z}

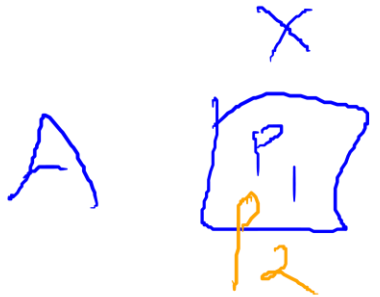
FIRST(ε) {ε}

FIRST(A) {z, ε, y}

Question 4

Is it possible to generate FIRST sets for a grammar with syntactic ambiguity? Explain your reasoning.





S ::= A

| B

A ::= k x g

B ::= k y g