1. 1. In abab split to ab ab the first a cant equal the second b but it can equal the second a as long as the first b does not equal the first a (reverse for second ab to first ab) not just a cant equal b, its ab cant equal ab in terms of a’s and b’s but not ab length aabbb = aabbb, ab = aaaaaaaaaabbbbbbbbbbbbb. Almost a\*b\* a\*b\* but the first \* cant equal second \*. How to break up a and b of separate sections rather than the same ab of same section. Cant have defaults bTa | ba because they cant be equal and there can be any combo.

S -> aTb | X | Y

T -> bTa | Y | X

X -> aX | a

Y -> bY | b

* 1. Treat abcd almost like (ab)^n (cd)^n

S -> abScd | ε

1. 1. A’s\*2 should be more than 3\*b’s, aaaabbb => a=2,b=1. #b=2#a + #

ε,ε,S#

a,a,ε

b,b,ε

ε, S, aSb

ε, S, T

ε, T, aTb

ε, T, b

ε,ε,#

* 1. Make a string then a c, then input trash, then pop the first string. Popping makes it backwards, then cycle more trash. How to check if string is in order, otherwise keep trash and dont pop on random character input.

ε,ε,S#

a,ε

c

b,ε

ε,ε,#