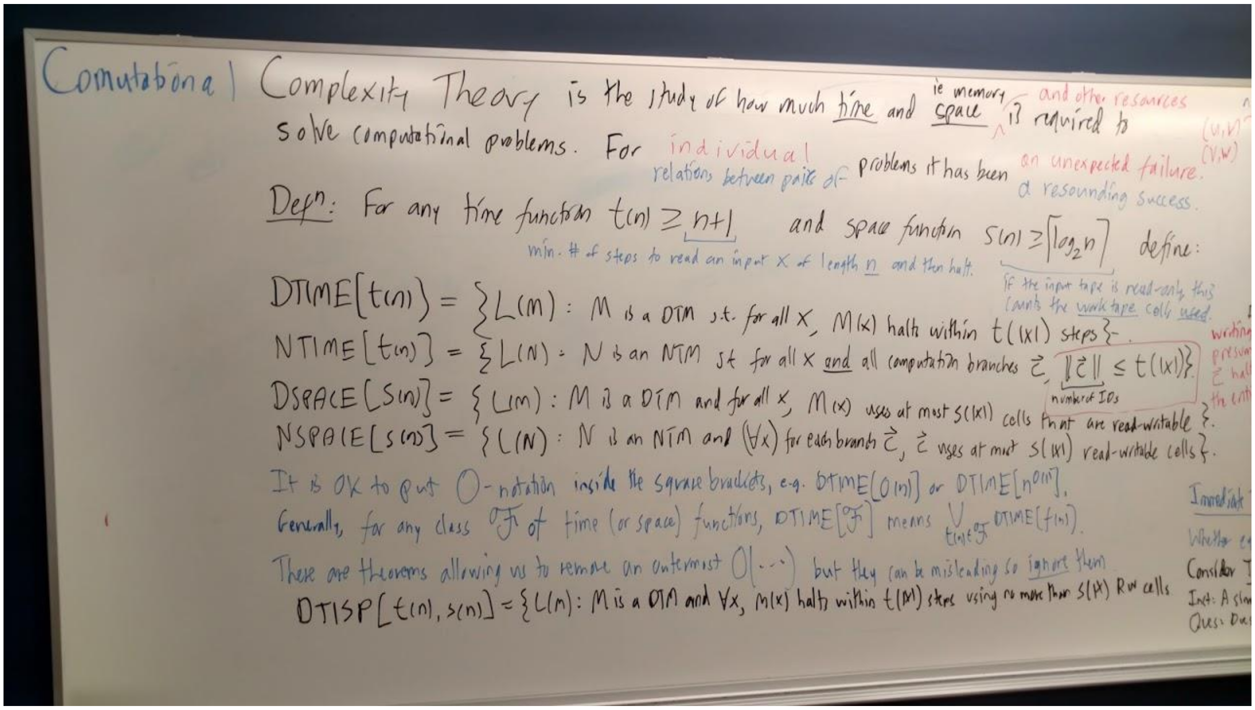
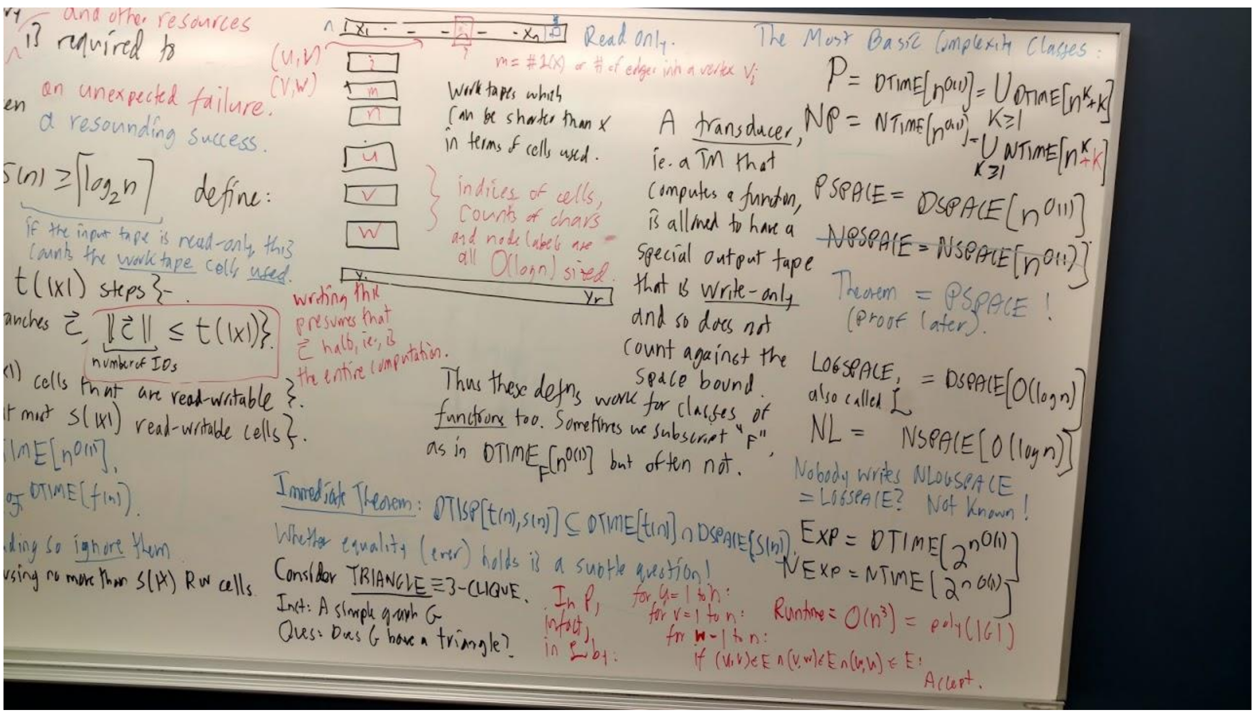
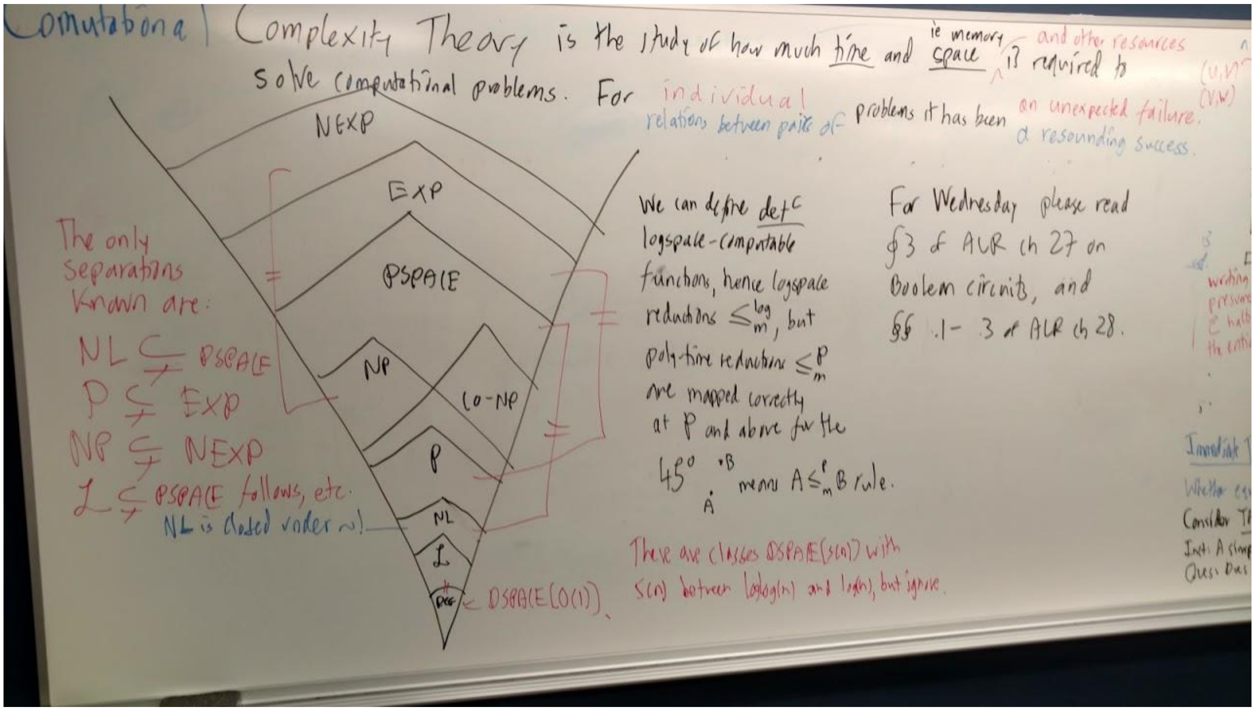
CSE596 Lecture Friday 10/18---the first word in blue is supposed to be “Computational”:






Computational Complexity Theory is the study of how much time and space ie memory and other resources is required to solve computational problems. For individual relations between pairs of problems it has been an unexpected failure. a resounding success.
NEXP
EXP
PSPACE
NP
Co-NP
P
NL
L
DSPACE(O(1))
The only separations known are:
NL ⊊ PSPACE
P ⊊ EXP
NP ⊊ NEXP
L ⊊ PSPACE follows, etc.
NL is closed under ~!
We can define det^C logspace-computable functions, hence logspace reductions ≤^log_m, but poly-time reductions ≤^p_m are mapped correctly at P and above for the 45° means A ≤^p_m B rule.
These are classes DSPACE(s(n)) with s(n) between loglog(n) and log(n), but ignore.
For Wednesday please read §3 of ALR ch 27 on Boolean circuits, and §§ .1- .3 of ALR ch 28.