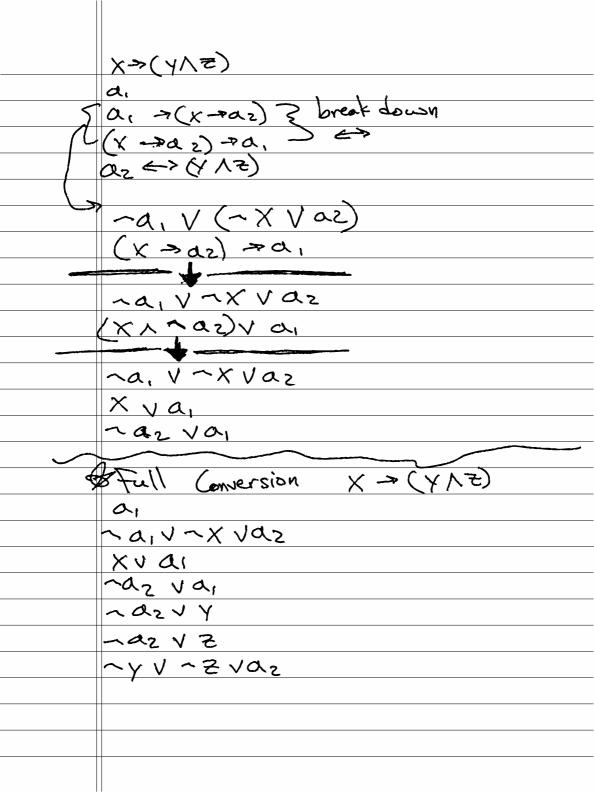
Convert to CNF using Tseitin's encoding ~(~r -> ~(P / 9)) What is CNF? Conjunctive Normal Form Atom := Variable | L|T Literal := Atom | ~ Atom Formula:= Clause / Formula Clause := Literal | Literal V Clause Why is it important? Be SAT solver's use CNF as input \* Equisatistiable = if formulas F & G

are both Satisfiable or both unsatisfiable \* Tseitin's Transformation = Converts F into equisatistiable CNF formula that is linear to size of F. Se auxiliary Variables X X > (YNZ) al a160 (x > 02) azer (YAZ)



HW #2 ~ (~r » ~ (PM)) acon (nronapa) apraco (PAQ) tasy conversion ~ apre VP ~apre ve ~pv~qvdprq a (nr > napra) a → ~ (~r → ~ dpre) ~ ~(~r >>~apr2) → a a > ~ ( rvapre) = a - (r / apre) na V (-r / apre) -a 125 na y apra ~ (r v rapag) = a runapre va ? ensy?

Solution?
a
~a /~r
~a vapa
-april VP
rapiq V p
~p v~q vapa
r va apre va
II

