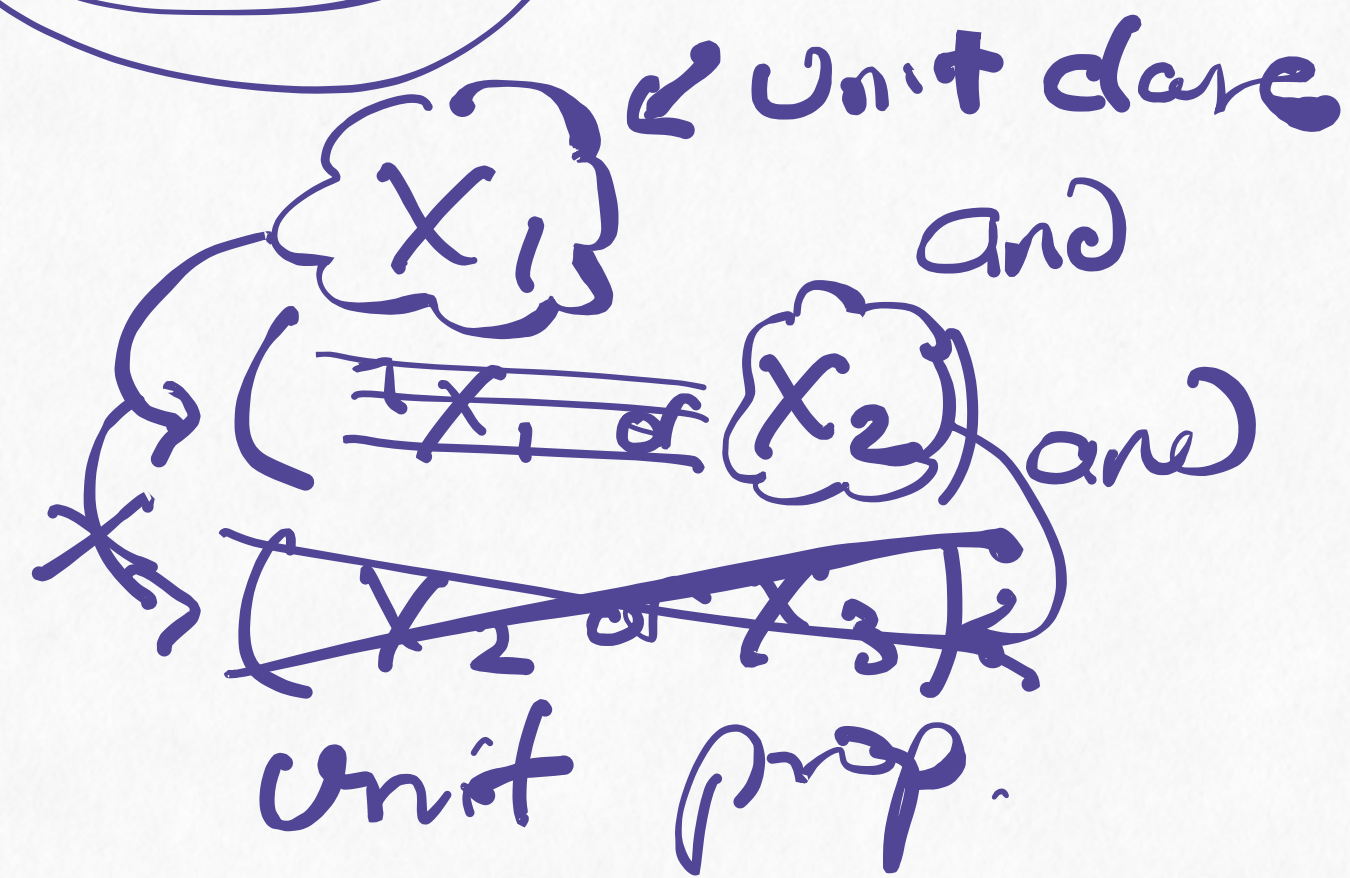
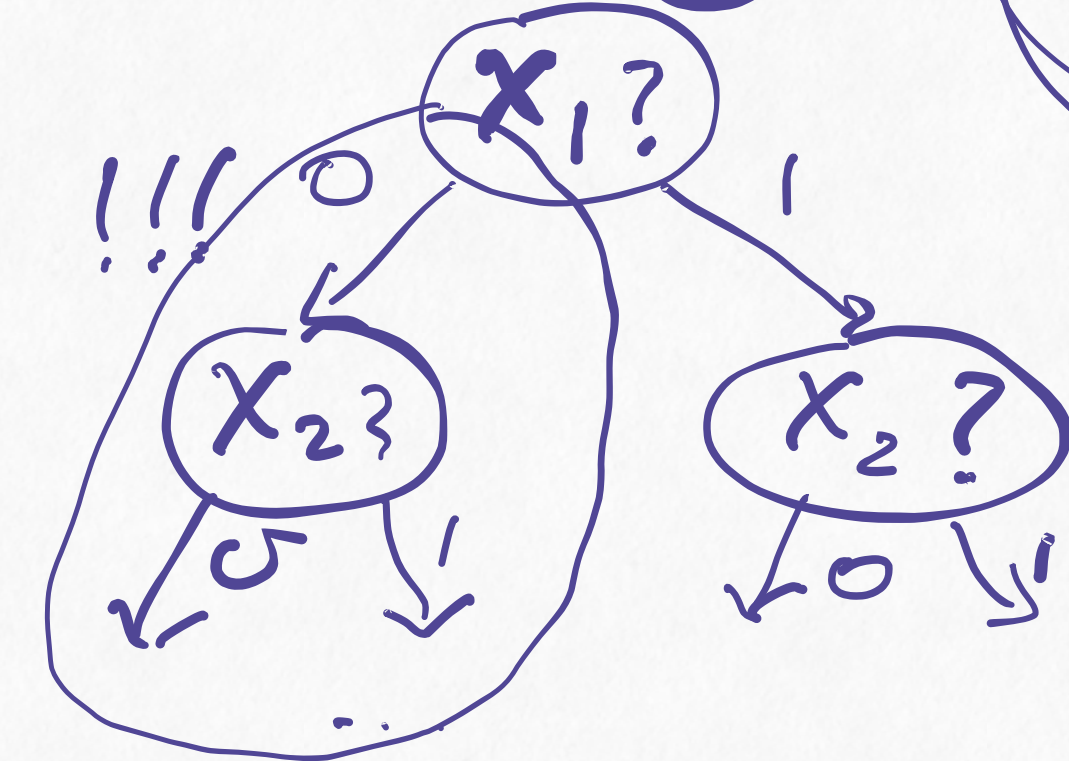
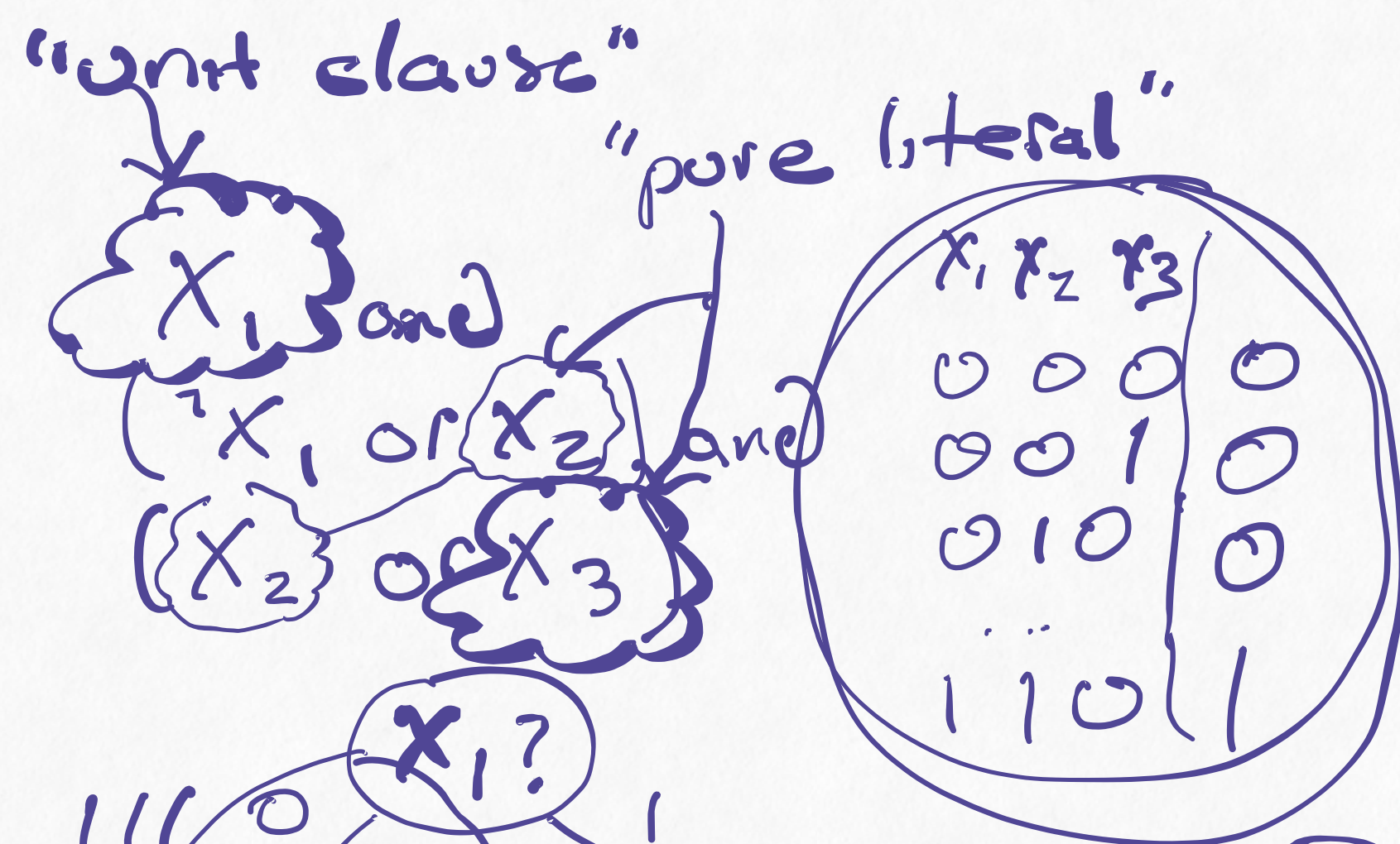




A literal is either
 - a variable or
 - $\neg$ a variable

A clause is
 $l_1 \text{ or } \dots \text{ or } l_k$

The empty clause ($\square$)
 is false

Conjunctive normal form
 (CNF) is an and over
 a clause set

Getting to CNF?

De Morgan's laws
 e.g. $\neg(P \wedge Q) = \neg P \vee \neg Q$
 Distributive law

$$\begin{aligned} (X_1 \vee X_2) \wedge 00 & \text{ " " } \\ (\neg X_1 \vee X_2) \wedge 10 & \text{ " " } \\ (X_1 \vee \neg X_2) \wedge \dots & \text{ " " } \\ (\neg X_1 \vee \neg X_2) \wedge \dots & \text{ " " } \end{aligned}$$

No purity
 No unit cl!

So 2 vars:

Add: $(X_1) \wedge \dots$

Blind backtracks such
 unit⁺ prop
 pure literal elim

= DPLL