

the portable generator  
was expensive, but  
it was worth it to  
finally be one of  
the cool kids.



$$\neg(A \wedge B)$$

$$(\neg A \vee \neg B)$$

$$A \vee B$$

$$\neg\neg A \vee \neg\neg B$$

$$\neg(\neg A \wedge \neg B)$$

$$(P \wedge \neg Q)$$

$$\neg \neg (P \wedge \neg Q)$$

$$\neg (\neg P \wedge \neg \neg Q)$$

$$\neg (\neg P \vee \neg Q)$$

$$\neg (P \rightarrow Q)$$

De Morgan

double neg

$P \boxtimes \begin{matrix} P \\ \neg P \\ \vdots \end{matrix}$

entailment  
 $\boxed{x} \models \boxed{y}$

$$(A \vee B) \wedge (A \vee C)$$

$$x \rightarrow y \equiv \neg x \vee y$$

↓

distribute

$$A \vee (B \wedge C)$$

P	P ∨ T
T	T
F	T

X  
X  
X

✓

∧

$$\left( \overset{\curvearrowright}{\neg P} \vee \left( \neg P \vee \left( \neg \right) \right) \right) \vee \neg(\neg \vee P) \vee$$

$$\left( (\neg P) \vee \neg \right) \wedge (\neg \vee P) \wedge P$$

