W7 Lecture Notes

Commutative Law

$$(P \wedge Q) \vee R \Leftrightarrow R \vee (P \wedge Q)$$

Distributive Law

$$R \vee (P \wedge Q) \Leftrightarrow (R \vee P) \wedge (R \vee Q)$$

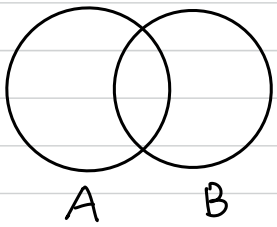
Truth Tables:

$$S \to T \quad \Leftrightarrow \quad \neg S \vee T$$

T	S	¬S	¬S ∨ T	S → T
T	T	F	T	T
F	T	F	F	F
T	F	T	T	T
F	F	T	T	T

Implication and Sets:

Can think of $A \to B$ as if x in A then x in B.



A is the premise, and B is the conclusion.

A if and only if B $\Rightarrow$ $A \to B$ only if (A only if B)
and
$B \to A$ if (A if B)