Cheatsheet - Laws of Propositional Logic

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1. Logic 1

	Disjunction	**Conjunction**
idempotent laws	$p \vee p \equiv p$	$p \wedge p \equiv p$
commutative laws	$p \vee q \equiv q \vee p$	$p \wedge q \equiv q \wedge p$
associative laws	$(p \vee q) \vee r \equiv p \vee (q \vee r)$	$(p \wedge q) \wedge r \equiv p \wedge (q \wedge r)$
distributive laws	$p \vee (q \wedge r) \equiv (p \vee q) \wedge (p \vee r)$	$p \wedge (q \vee r) \equiv (p \wedge q) \vee (p \wedge r)$
identity laws	$p \vee F \equiv p$	$p \wedge T \equiv p$
domination laws	$p \vee T \equiv T$	$p \wedge F \equiv F$

2. Logic 2

	Disjunction	**Conjunction**
De Morgan's laws	$\neg(p \vee q) \equiv \neg p \wedge \neg q$	$\neg(p \wedge q) \equiv \neg p \vee \neg q$
absorption laws	$p \vee (p \wedge q) \equiv p$	$p \wedge (p \vee q) \equiv p$
negation laws	$p \vee \neg p \equiv T$	$p \wedge \neg p \equiv F$
double negation law	$\neg \neg p \equiv p$	

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