

1. $\neg\neg p \iff p$	double negation
2a. $(p \vee q) \iff (q \vee p)$ b. $(p \wedge q) \iff (q \wedge p)$ c. $(p \leftrightarrow q) \iff (q \leftrightarrow p)$	commutative laws
3a. $[(p \vee q) \vee r] \iff [p \vee (q \vee r)]$ b. $[(p \wedge q) \wedge r] \iff [p \wedge (q \wedge r)]$	associative laws
4a. $[p \vee (q \wedge r)] \iff [(p \vee q) \wedge (p \vee r)]$ b. $[p \wedge (q \vee r)] \iff [(p \wedge q) \vee (p \wedge r)]$	distributive laws
5a. $(p \vee p) \iff p$ b. $(p \wedge p) \iff p$	idempotent laws
6a. $(p \vee 0) \iff p$ b. $(p \vee 1) \iff 1$ c. $(p \wedge 0) \iff 0$ d. $(p \wedge 1) \iff p$	identity laws ¹
7a. $(p \vee \neg p) \iff 1$ b. $(p \wedge \neg p) \iff 0$	DeMorgan laws
8a. $\neg(p \vee q) \iff (\neg p \wedge \neg q)$ b. $\neg(p \wedge q) \iff (\neg p \vee \neg q)$ c. $(p \vee q) \iff \neg(\neg p \wedge \neg q)$ d. $(p \wedge q) \iff \neg(\neg p \vee \neg q)$	contrapositive
9. $(p \rightarrow q) \iff (\neg q \rightarrow \neg p)$	implication
10a. $(p \rightarrow q) \iff (\neg p \vee q)$ b. $(p \rightarrow q) \iff \neg(p \wedge \neg q)$	equivalence
11a. $(p \vee q) \iff (\neg p \rightarrow q)$ b. $(p \wedge q) \iff \neg(p \rightarrow \neg q)$	exportation law
12a. $[(p \rightarrow r) \wedge (q \rightarrow r)] \iff [(p \vee q) \rightarrow r]$ b. $[(p \rightarrow q) \wedge (p \rightarrow r)] \iff [p \rightarrow (q \wedge r)]$	reductio ad absurdum
13. $(p \leftrightarrow q) \iff [(p \rightarrow q) \wedge (q \rightarrow p)]$	
14. $[(p \wedge q) \rightarrow r] \iff [p \rightarrow (q \rightarrow r)]$	
15. $(p \rightarrow q) \iff [(p \wedge \neg q) \rightarrow 0]$	

16. $p \iff (p \vee q)$	addition
17. $(p \wedge q) \iff p$	simplification
18. $(p \rightarrow 0) \iff \neg p$	absurdity
19. $[p \wedge (p \rightarrow q)] \iff q$	modus ponens
20. $[(p \rightarrow q) \wedge \neg q] \iff \neg p$	modus tollens
21. $[(p \vee q) \wedge \neg p] \iff q$	disjunctive syllogism
22. $p \iff [q \rightarrow (p \wedge q)]$	transitivity of \leftrightarrow
23. $[(p \leftrightarrow q) \wedge (q \leftrightarrow r)] \iff (p \leftrightarrow r)$	transitivity of \rightarrow or hypothetical syllogism
24. $[(p \rightarrow q) \wedge (q \rightarrow r)] \iff (p \rightarrow r)$	
25a. $(p \rightarrow q) \iff [(p \vee r) \rightarrow (q \vee r)]$ b. $(p \rightarrow q) \iff [(p \wedge r) \rightarrow (q \wedge r)]$ c. $(p \rightarrow q) \iff [(q \rightarrow r) \rightarrow (p \rightarrow r)]$	constructive dilemmas
26a. $[(p \rightarrow q) \wedge (r \rightarrow s)] \iff [(p \vee r) \rightarrow (q \vee s)]$ b. $[(p \rightarrow q) \wedge (r \rightarrow s)] \iff [(p \wedge r) \rightarrow (q \wedge s)]$	destructive dilemmas
27a. $[(p \rightarrow q) \wedge (r \rightarrow s)] \iff [(\neg q \vee \neg s) \rightarrow (\neg p \vee \neg r)]$ b. $[(p \rightarrow q) \wedge (r \rightarrow s)] \iff [(\neg q \wedge \neg s) \rightarrow (\neg p \wedge \neg r)]$	

Equivalenties:

30a.	$p \iff \forall x p$ (x niet vrij in p)	loze kwantificatie
ba.	$p \iff \exists x p$ (x niet vrij in p)	
31a.	$\forall x p(x) \iff \forall y p(y)$	herbenoemen van gebonden variabele
b.	$\exists x p(x) \iff \exists y p(y)$	
32a.	$\forall x \forall y p(x, y) \iff \forall y \forall x p(x, y)$	kwantorwisseling
b.	$\exists x \exists y p(x, y) \iff \exists y \exists x p(x, y)$	
33a.	$\forall x(p(x) \wedge q(x)) \iff \forall x p(x) \wedge \forall x q(x)$	$\forall(\wedge) \iff \forall \wedge \forall$ (\forall distribueert over \wedge)
b.	$\exists x(p(x) \vee q(x)) \iff \exists x p(x) \vee \exists x q(x)$	$\exists(\vee) \iff \exists \vee \exists$ (\exists distribueert over \vee)
34a.	$\forall x(p \vee q(x)) \iff p \vee \forall x q(x)$ (x niet vrij in p)	
b.	$\exists x(p \wedge q(x)) \iff p \wedge \exists x q(x)$ (x niet vrij in p)	
35a.	$\neg \forall x p(x) \iff \exists x \neg p(x)$	$\neg \forall \iff \exists \neg$ (De Morgan)
b.	$\neg \exists x p(x) \iff \forall x \neg p(x)$	$\neg \exists \iff \forall \neg$ (De Morgan)

Implicaties:

36.	$\forall x p(x) \Rightarrow \exists x p(x)$	$\forall \Rightarrow \exists$
37.	$\exists x \forall y p(x, y) \Rightarrow \forall y \exists x p(x, y)$	$\exists \forall \Rightarrow \forall \exists$
38a.	$\forall x p(x) \vee \forall x q(x) \Rightarrow \forall x(p(x) \vee q(x))$	$\forall \vee \forall \Rightarrow \forall(\vee)$
b.	$\exists x(p(x) \wedge q(x)) \Rightarrow \exists x p(x) \wedge \exists x q(x)$	$\exists(\wedge) \Rightarrow \exists \wedge \exists$