

A, B, so C	A, since B and C	A, so B, since C
A and B	A but B	A but not B
A even though not B	A or B	either A or B
it is not the case that not A	that not A is not true	it is not false that not A
not both A and B	not both A and not B	both not A and not B
neither A nor B	not either A or B	either not A or not B

$A, C \therefore B$

$B, C \therefore A$

$A, B \therefore C$

$A \& \sim B$

$A \& B$

$A \& B$

$A \vee B$

$A \vee B$

$A \& \sim B$

$\sim(\sim(\sim A))$

$\sim\sim\sim A$

$\sim(\sim A)$

$\sim\sim A$

$\sim(\sim A)$

$\sim\sim A$

$\sim A \& \sim B$

$\sim(A \& \sim B)$

$\sim(A \& B)$

$\sim A \vee \sim B$

$\sim(A \vee B)$

$\sim A \& \sim B$

$\sim(A \vee B)$

not either not A or not B	A, B, and C	A, B, or C
one of A, B, and C	not all of A, B, and C	not any of A, B, and C
without B, not A	if A then B	B, if A
if not A, then not B	not B, if not A	not A unless B
not A unless not B	A unless B	A unless not B
A only if B	not A only if B	A only if not B

$A \vee B \vee C$	$A \& B \& C$	$\sim(\sim A \vee \sim B)$
$\sim A \& \sim B \& \sim C$	$\sim(A \& B \& C)$	$A \vee B \vee C$
$A \supset B$	$A \supset B$	$A \supset B$ $\sim B \supset \sim A$
$A \supset B$ $\sim B \supset \sim A$	$\sim A \supset \sim B$	$\sim A \supset \sim B$
$B \supset A$ $\sim A \supset \sim B$	$\sim B \supset A$ $\sim A \supset B$	$A \supset \sim B$ $B \supset \sim A$
$A \supset \sim B$ $B \supset \sim A$	$\sim A \supset B$ $\sim B \supset A$	$A \supset B$ $\sim B \supset \sim A$

unless B, not A	unless B, A	only if B, A
not A without B	A occurred without B	A if and only if B
A, but only if B	if and only if B, A	A exactly when B
if A and B, then C	if A, and if B, then C	if A, then if B, then C
if A, then B and C	if A, then either B or C	if either A or B, then C
either A or both B and C	both either A or B, and C	either both A and B, or C

$A \supset B$ $\sim B \supset \sim A$	$\sim B \supset A$	$A \supset B$ $\sim B \supset \sim A$
$A \equiv B$ $(A \supset B) \& (B \supset A)$	$A \& \sim B$ <p>when A is on the left side, and is affirmative and factual</p>	$A \supset B$ $\sim B \supset \sim A$
$A \equiv B$	$A \equiv B$	$A \equiv B$
$A \supset (B \supset C)$	$(A \& B) \supset C$ $A \supset (B \supset C)$	$(A \& B) \supset C$
$(A \vee B) \supset C$	$A \supset (B \vee C)$	$A \supset (B \& C)$
$(A \& B) \vee C$	$(A \vee B) \& C$	$A \vee (B \& C)$