Special Cases for Translation

CONSTRUCTION	TRANSLATION
neither p nor q not either p or q both p and q are not not p and not q	~(p v q) or ~p • ~q
not both p and q not p or not q	~(p • q) or ~p v ~q
p or q but not both	(p v q) • ~(p • q)
p unless q	p v q or ~q ⊃ p or ~p ⊃ q
if p then q if p, q p only if q p is sufficient for q p implies q	p ⊃ q
p if q p is necessary for q p is implied by q	q ⊃ p

For transformation of the conjunction and disjunction, see DeMorgan's Theorem:

~(p • q) ≡ (~p v ~q)
~(p v q) ≡ (~p • ~q)

For transformation of the conditional, see Contraposition:

(p ⊃ q) ≡ (~q ⊃ ~p)

Exclusive disjunction (p v q) • ~(p • q)
Inclusive disjunction (p v q) • (p • q)