Write negotations-

Quantifiers

Consider the following -

A) There are Δ's that are equilateral. T

B) Some rectangles are square. T

C) A lot of students love Maths. T

Check truthvalues of these and their negotations.

~(A): There are triangles that are not equilateral T.

~(B): Some rectangles are not square. T

~(C): A lot of students do not love Maths. T

∴ Essentially, we look at two types of quantifiers:

i) For all, ∀
ii) There exists, ∃

Proposition Based Reasoning works with only with above 2 quantifiers.

Associativity of $\wedge$

p	q	r	$(p \wedge q) \wedge r$	$p \wedge (q \wedge r)$
T	T	T	T	T
T	T	F	F	F
T	F	T	F	F
T	F	F	F	F
F	T	T	F	F
F	T	F	F	F
F	F	T	F	F
F	F	F	F	F

By truth Table,

$(p \wedge q) \wedge r \equiv p \wedge (q \wedge r)$