

Ex:-

Not everyone likes cheese

$$\neg(\forall n)(P(n) \rightarrow L(n, c)) \rightarrow (1)$$

Using DeMorgan's Law i.e.

$$\neg(A \vee B) \equiv \neg A \wedge \neg B$$

\therefore (1) can be written as

$$\neg(\forall n) \neg(P(n) \rightarrow L(n, c)) \rightarrow (2)$$

also by evaluating (2) we get

$$\neg \forall n \neg (\neg P(n) \vee L(n, c)) \quad [\because P \rightarrow Q \equiv \neg P \vee Q]$$

$$\neg \forall n P(n) \wedge \neg L(n, c) \quad [\because \neg(A \vee B) \equiv \neg A \wedge \neg B]$$

$$\boxed{(\exists n)(P(n) \wedge \neg L(n, c))} \quad [\because \neg(\forall n) \equiv \exists n]$$