

$$[\sim p \wedge (p \vee q)] \rightarrow p = \sim(\sim p \wedge (p \wedge q)) \vee p \text{ laws of expansion}$$

$$= p \vee \sim(p \vee q) \vee q \text{ First DeMorgan law}$$

$$= (p \vee q) \vee \sim(p \vee p) \text{ Associative laws for disjuncts}$$

$$= \mathbf{T} \vee \mathbf{T} \quad \text{Laws for disjunctions}$$

$$= \mathbf{T} \text{ Domination law}$$