//Matthew McMillian
// ≡ ¬ Λ V →

12. a.----------

(¬p Λ (p V q)) → q

(¬p Λ (p V q)) ≡ (¬p Λ p) V (¬p Λ q) (DeMorgan's Law)
≡ F V (¬p Λ q) (Identity)
≡ (¬p Λ q) (Domination)
≡ q (Simplification)

(¬p Λ (p V q)) → q ≡ ((¬p Λ p) V (¬p Λ q)) → q (DeMorgan's Law)
≡ (F V (¬p Λ q)) → q (Simplification)
≡ (¬p Λ q) → q (Domination)
≡ q → q
≡ T

14. ----------

(¬p Λ (p → q)) → ¬q

(¬p Λ (p → q)) ≡ (¬p Λ (p → q))
ANSWER:: Contingency

34. ----------

//p = Logic is Difficult
//q = Not many students like logic
//r = Mathimatics is easy

//1. p V q
//2. r → q

a. ¬q → ¬r
-Assume q is true; (p V q = T) & (r → q = T)
-Assume r is false; (¬q → ¬r = F)

b. ¬r → q
-Assume p is true
-Assume q is false; (p V q = T) & (r → q = T)
-Assume r is false; (¬r → q = F)

c. ¬r V p
-Assume p is true; (p V q = T), (¬r V p = T)

d. ¬p V ¬q
-Assume q is true; (p V q = T)
-Assume p is false; (¬p V ¬q = F)

e. q → (¬q V ¬p)
-Assume q is true; (p V q = T) & (r → q = T)
-Assume p is true; (q → (¬q V ¬p) = F)