

Homework Handout #3 - Practice Problems for Test #3

1.     1.  $G \supset H$   
       2.  $G \supset I$                      /  $G \supset (H \cdot I)$
  
2.     1.  $J \equiv K$   
       2.  $\sim K \equiv \sim L$                  /  $J \equiv L$
  
3.     1.  $M$      /  $N \supset \{O \supset \{P \supset [(M \cdot N) \cdot (O \cdot P)]\}\}$
  
4.     Prove that ' $R \supset [(R \supset S) \supset S]$ ' is a logical truth.
  
5.     1.  $D \supset E$   
       2.  $E \supset (F \cdot G)$   
       3.  $\sim F \vee \sim G$                  /  $\sim D$
  
6.     1.  $(P \vee Q) \vee (\sim R \vee S)$   
       2.  $\sim Q \cdot (\sim S \cdot \sim P)$          /  $\sim R$
  
7.     Prove that ' $A \vee [(\sim A \vee B) \cdot (\sim A \vee C)]$ ' is a logical truth
  
8.     1.  $(A \vee B) \supset \sim(F \cdot D)$   
       2.  $\sim(A \cdot \sim D)$   
       3.  $\sim F \supset \sim(C \cdot D)$   
       4.  $C \vee A$                      /  $A \equiv \sim C$
  
9.     1.  $(A \cdot B) \supset C$   
       2.  $(F \cdot D) \supset E$   
       3.  $A \cdot D$   
       4.  $B \vee F$                      /  $C \vee E$
  
10.    1.  $\sim F \supset (G \cdot H)$   
       2.  $F \supset (I \vee J)$   
       3.  $\sim[G \cdot (K \cdot \sim J)]$   
       4.  $K \equiv (L \cdot \sim J)$              /  $K \supset I$