

Second 5 Replacement Rules  
Problem Set

1.

1.  $M \rightarrow E$

2.  $(A \cdot M) \vee G$

3.  $G \rightarrow E$  / $\therefore E$

2.

1.  $D \rightarrow (L \rightarrow J)$

2.  $D \vee L$

3.  $D \leftrightarrow L$  / $\therefore J$

3.

1.  $\sim B \rightarrow P$

2.  $\sim R \vee \sim P$  / $\therefore R \rightarrow B$

4.

1.  $\sim L \leftrightarrow M$

2.  $(A \vee \sim H) \leftrightarrow (M \cdot \sim F)$

3.  $\sim(F \vee L)$  / $\therefore H \rightarrow A$

5.

1.  $H \rightarrow (D \rightarrow \sim H)$

2.  $\sim T \rightarrow T$

3.  $\sim(T \cdot \sim D)$  / $\therefore \sim H$

6.

1.  $(C \cdot P) \vee E$

2.  $\sim(E \vee C) \vee (\sim M \rightarrow G)$  / $\therefore \sim G \rightarrow M$

7.

1.  $\sim H \cdot (\sim J \cdot \sim U)$

2.  $D \cdot (H \vee S)$

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3.  $S \rightarrow [D \rightarrow (U \vee J)]$  \_\_\_\_\_  $\therefore \sim (S \cdot D)$

8.

1.  $L \vee (M \cdot L)$

2.  $\sim H \vee (R \rightarrow \sim L)$

3.  $\sim R \rightarrow \sim L$  \_\_\_\_\_  $\therefore \sim H$

9.

1.  $(R \rightarrow G) \leftrightarrow (\sim N \vee L)$

2.  $\sim (R \rightarrow G) \rightarrow \sim R$  \_\_\_\_\_  $\therefore R \rightarrow (L \vee \sim N)$

10.

1.  $(W \cdot H) \rightarrow \sim A$

2.  $(\sim W \rightarrow B) \cdot H$

3.  $(H \cdot B) \rightarrow \sim A$  \_\_\_\_\_  $\therefore \sim A$