

Reductio Ad Absurdum / Indirect Proof
Problem Set

1.

1. $B \rightarrow (H \cdot G)$

2. $E \vee \sim B$

3. $E \rightarrow \sim G$ $\therefore \sim B$

2.

1. $D \rightarrow (C \vee M)$

2. $L \vee D$

3. $L \rightarrow (\sim M \cdot D)$ $\therefore M \vee C$

3.

1. $K \vee A$

2. $\sim A \rightarrow (R \cdot \sim K)$ $\therefore A$

4.

1. $T \cdot \sim W$

2. $(E \cdot M) \vee (C \cdot E)$

3. $C \rightarrow W$ $\therefore M$

5.

1. $H \rightarrow I$

2. $\sim (C \cdot R)$

3. $\sim H \rightarrow C$ $\therefore \sim R \vee I$

6.

1. $W \rightarrow (\sim G \cdot D)$

2. $\sim (G \cdot W) \rightarrow \sim D$

3. $F \rightarrow D$ $\therefore \sim (F \vee W)$

7.

1. $\sim (E \cdot N)$

2. $\sim S \vee H$

3. $(N \rightarrow H) \rightarrow (N \cdot E)$ $\therefore \sim (N \rightarrow S)$

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8.

1. $A \leftrightarrow \sim R$

2. $L \vee R$

3. $(\sim R \cdot L) \rightarrow \sim A$ $\therefore R$

9.

1. $U \vee \sim M$

2. $J \rightarrow \sim M$

3. $\sim M \rightarrow (U \vee J)$ $\therefore M$

10.

1. $D \vee [(E \cdot \sim L) \vee T]$

2. $(\sim T \rightarrow \sim L) \rightarrow U$

3. $(\sim E \rightarrow T) \rightarrow C$ $\therefore \sim(U \cdot C) \rightarrow D$