

Worksheet Exercise 2.8.A.

Name _____

Deductions, Supply reasons

Class _____ Date _____

Part A. Supply the missing reasons in the following deductions. Use the standard method of annotating deductions, as in problem #1. Always cite the line numbers used, and cite the abbreviated name of the rule used. In all these problems lines 1 and 2 are premisses, and they are annotated as "Prem".

- | | |
|---|---|
| 1) 1. $A \supset B$ Prem
2. $B \supset C$ Prem
<hr style="width: 20%; margin-left: 0;"/> 3. $A \supset C$ 1,2, Hyp Syll
4. $\sim C \supset \sim A$ 3, Contrap | 2) 1. $T \vee (D \ \& \ \sim E)$ Prem
2. $\sim T$ Prem
<hr style="width: 20%; margin-left: 0;"/> 3. $D \ \& \ \sim E$ _____
4. $\sim E$ _____ |
| 3) 1. $(A \vee B) \supset C$ Prem
2. $(A \vee B) \ \& \ F$ Prem
<hr style="width: 20%; margin-left: 0;"/> 3. $A \vee B$ _____
4. C _____ | 4) 1. $\sim(Q \vee S)$ Prem
2. B Prem
<hr style="width: 20%; margin-left: 0;"/> 3. $\sim Q \ \& \ \sim S$ _____
4. $B \ \& \ (\sim Q \ \& \ \sim S)$ _____ |
| 5) 1. $\sim B \ \& \ A$ Prem
2. $(K \ \& \ \sim E) \supset B$ Prem
<hr style="width: 20%; margin-left: 0;"/> 3. $\sim B$ _____
4. $\sim(K \ \& \ \sim E)$ _____
5. $\sim K \vee \sim(\sim E)$ _____ | 6) 1. $\sim J \supset \sim I$ Prem
2. $(H \supset P) \ \& \ (H \vee \sim J)$ Prem
<hr style="width: 20%; margin-left: 0;"/> 3. $H \supset P$ _____
4. $H \vee \sim J$ _____
5. $P \vee \sim I$ _____ |
| 7) 1. $L \supset (B \ \& \ E)$ Prem
2. $E \supset S$ Prem
<hr style="width: 20%; margin-left: 0;"/> 3. $L \supset B$ _____
4. $L \supset E$ _____
5. $L \supset S$ _____ | 8) 1. $L \supset (B \ \& \ E)$ Prem
2. $\sim E$ Prem
<hr style="width: 20%; margin-left: 0;"/> 3. $(B \ \& \ E) \supset E$ _____
4. $\sim(B \ \& \ E)$ _____
5. $\sim L$ _____ |
| 9) 1. $A \equiv \sim B$ Prem
2. $C \equiv \sim B$ Prem
<hr style="width: 20%; margin-left: 0;"/> 3. $A \supset \sim B$ _____
4. $\sim B \supset C$ _____
5. $A \supset C$ _____
6. $\sim C \supset \sim A$ _____ | 10) 1. $(\sim S \vee Y) \vee \sim A$ Prem
2. $\sim Y$ Prem
<hr style="width: 20%; margin-left: 0;"/> 3. $(Y \vee \sim S) \vee \sim A$ _____
4. $Y \vee (\sim S \vee \sim A)$ _____
5. $\sim S \vee \sim A$ _____
6. $\sim(S \ \& \ A)$ _____ |