

Worksheet Exercise 2.9.C.

Name _____

Deductions, full blast

Class _____ Date _____

Part C. Give deductions for the following arguments, use as many blanks as you need. These are a bit harder yet.

(1)

1. $A \vee W$ Prem
 2. $\sim A \vee \sim W$ Prem $\therefore \sim W \equiv A$

 3. _____
 4. _____
 5. _____
 6. _____
 7. _____
 8. _____
 9. _____

(2)

1. $S \equiv \sim K$ Prem
 2. K Prem
 3. $\sim B \supset S$ Prem $\therefore B \& K$

 4. _____
 5. _____
 6. _____
 7. _____
 8. _____
 9. _____
 10. _____

(3)

1. $(S \vee \sim S) \supset \sim B$ Prem
 2. $(A \& P) \supset B$ Prem $\therefore \sim A \vee \sim P$

 3. _____
 4. _____
 5. _____
 6. _____
 7. _____
 8. _____
 9. _____

(4)

1. $(A \& B) \& \sim(\sim C)$ Prem
 2. $(D \vee D) \& M$ Prem $\therefore (C \& B) \& D$

 3. _____
 4. _____
 5. _____
 6. _____
 7. _____
 8. _____
 9. _____

(5)

1. $U \supset R$ Prem
 2. $\sim N \supset \sim F$ Prem
 3. $N \supset J$ Prem
 4. $\sim U \supset \sim J$ Prem $\therefore F \supset R$

 5. _____
 6. _____
 7. _____
 8. _____
 9. _____
 10. _____

(6)

1. $P \supset T$ Prem
 2. $\sim T \supset \sim Q$ Prem
 3. $\sim(\sim P \& \sim Q)$ Prem $\therefore T$

 4. _____
 5. _____
 6. _____
 7. _____
 8. _____
 9. _____
 10. _____

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(7)

- | | |
|-----------------------|-------------------------------------|
| 1. $\sim Q \supset E$ | Prem |
| 2. $\sim A \supset E$ | Prem |
| 3. $\sim E$ | Prem |
| | $\therefore (A \& Q) \vee (A \& E)$ |

- | | |
|-----------|-------|
| 4. _____ | _____ |
| 5. _____ | _____ |
| 6. _____ | _____ |
| 7. _____ | _____ |
| 8. _____ | _____ |
| 9. _____ | _____ |
| 10. _____ | _____ |

(8)

- | | |
|----------------------|-----------------------|
| 1. $A \vee (B \& C)$ | Prem |
| 2. $A \supset M$ | Prem |
| 3. $M \supset D$ | Prem |
| | $\therefore D \vee B$ |

- | | |
|----------|-------|
| 4. _____ | _____ |
| 5. _____ | _____ |
| 6. _____ | _____ |
| 7. _____ | _____ |
| 8. _____ | _____ |
| 9. _____ | _____ |