

**Worksheet Exercise 2.9.B.**

Name \_\_\_\_\_

Deductions, full blast

Class \_\_\_\_\_ Date \_\_\_\_\_

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

(1)

1.  $\sim(A \ \& \ B)$  Prem  
 2.  $A$  Prem  
 3.  $\sim B \supset D$  Prem  $\therefore D$   
 -----  
 4. \_\_\_\_\_  
 5. \_\_\_\_\_  
 6. \_\_\_\_\_  
 7. \_\_\_\_\_

(2)

1.  $\sim(G \ \& \ \sim(\sim H))$  Prem  
 2.  $\sim H \supset D$  Prem  $\therefore G \supset D$   
 -----  
 3. \_\_\_\_\_  
 4. \_\_\_\_\_  
 5. \_\_\_\_\_  
 6. \_\_\_\_\_  
 7. \_\_\_\_\_

(3)

1.  $\sim L$  Prem  
 2.  $\sim N$  Prem  
 $\therefore \sim(L \vee N) \vee Q$   
 -----  
 3. \_\_\_\_\_  
 4. \_\_\_\_\_  
 5. \_\_\_\_\_  
 6. \_\_\_\_\_

(4)

1.  $K \vee M$  Prem  
 2.  $\sim M$  Prem  
 $\therefore \sim(\sim K \vee M)$   
 -----  
 3. \_\_\_\_\_  
 4. \_\_\_\_\_  
 5. \_\_\_\_\_  
 6. \_\_\_\_\_

(5)

1.  $\sim R \vee \sim S$  Prem  
 2.  $\sim R \vee S$  Prem  $\therefore \sim R$   
 -----  
 3. \_\_\_\_\_  
 4. \_\_\_\_\_  
 5. \_\_\_\_\_  
 6. \_\_\_\_\_

(6)

1.  $F \supset (G \ \& \ A)$  Prem  
 2.  $(\sim G) \ \& \ M$  Prem  $\therefore \sim F$   
 -----  
 3. \_\_\_\_\_  
 4. \_\_\_\_\_  
 5. \_\_\_\_\_  
 6. \_\_\_\_\_

(7)

1.  $F \supset A$  Prem  
 2.  $G \ \& \ \sim A$  Prem  $\therefore \sim F \vee X$   
 -----  
 3. \_\_\_\_\_  
 4. \_\_\_\_\_  
 5. \_\_\_\_\_  
 6. \_\_\_\_\_

(8)

1.  $S \supset \sim M$  Prem  
 2.  $M \vee T$  Prem  
 3.  $S \supset \sim T$  Prem  $\therefore \sim S$   
 -----  
 4. \_\_\_\_\_  
 5. \_\_\_\_\_  
 6. \_\_\_\_\_  
 7. \_\_\_\_\_