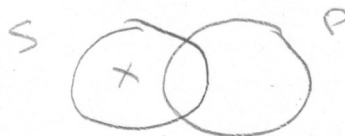
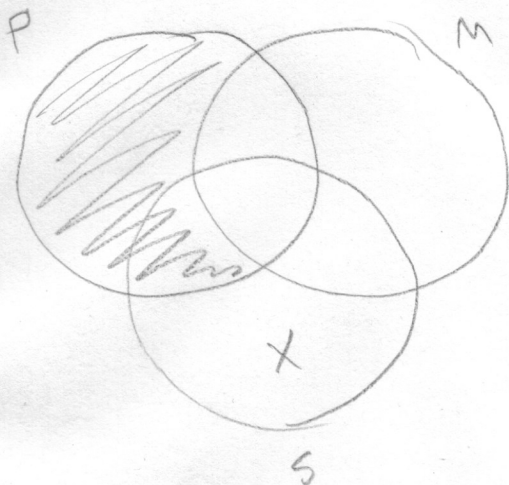


1.



AOO - 2 is Valid

2.

A	B	$\sim(A \cdot \sim B)$	$(\sim B \cdot \sim A)$	$B \vee A$
T	T	FT	F	T
T	F	F	F	T
F	T	T	F	T
F	F	T	T	F

→ Invalid:  
can't have  
two false  
premises  
making a  
true  
conclusion

3.

$$1. (C \vee \sim G) \supset (\sim P \cdot L)$$

$$2. (\sim P \cdot C) \supset (C \supset D)$$

$$3. C \cdot \sim R \quad \therefore D \vee R$$

$$4. C$$

$$5. (C \vee \sim G)$$

$$6. (\sim P \cdot L)$$

$$7. \sim P$$

$$8. (\sim P \cdot C)$$

$$9. C \supset D$$

$$10. D$$

$$11. D \vee R$$

Simp 3

Addition 4

Modus Ponens 5, 1

Simp 6

Conjunction 7, 4

Modus ponens 2, 8

Modus ponens 9, 4

Addition 10