

Worksheet Exercise 2.5.B.

Name _____

Demonstrating Laws of Logic

Class _____ Date _____

Part B. These are the laws of logic that we discussed above. Give complete truth-tables for them to show that they are valid. Label the columns as "aux," "prem," or "concl."

1.

p q	
p \supset q	
p	
\therefore q	

the argument
pattern is:

2.

p q	
p \supset q	
\sim q	
\therefore \sim p	

the argument
pattern is:

3.

p q r	
p \supset q	
q \supset r	
\therefore p \supset r	

the argument
pattern is:

4.

p q	
p & q	
\therefore p	

the argument
pattern is:

5.

p q	
p	
q	
\therefore p & q	

the argument
pattern is:

6.

p q	
p \vee q	
\sim p	
\therefore q	

the argument
pattern is:

>> continued on back side >>

7.	p q		the argument pattern is: _____
	$\frac{p}{\therefore p \vee q}$		

8.	p q		the argument pattern is: _____
	$\frac{p \supset q}{p \supset \sim q}$ $\therefore \sim p$		

9.	p q r s		the argument pattern is: _____
	$\frac{p \vee q}{p \supset r}$ $\frac{q \supset s}{\therefore r \vee s}$		

10.	p q		the argument pattern is: _____
	$\frac{p \equiv q}{(p \supset q) \& (q \supset p)}$		

11.	p q r		the argument pattern is: _____
	$\frac{p \supset (q \& r)}{(p \supset q) \& (p \supset r)}$		