

Sept. 25, 2006

Pg. 14-15: Written: 1-18 (all): No Truth Values

1.  $p \vee q$

2.  $r \vee p$

3.  $q \vee \sim r$

4.  $\sim p \vee r$

5.  $r \vee \sim p$

6.  $\sim r \wedge \sim (q \vee p)$

7. The Thames flows through London or the Seine flows through Paris
8. The Thames flows through London or the Nile flows through Rome
9. The Seine flows through Paris or the Nile flows through Rome
10. The Thames does not flow through London or the Seine flows through Paris
11. The Thames does not flow through London or the Seine does not flow through Paris
12. The Seine flows through Paris or the Nile does not flow through Rome
13. The Thames does not flow through London or the Nile does not flow through Rome
14. The Seine does not flow through Paris or the Thames flows through London
15. Either the Thames flows through London or the Seine flows through Paris, or the Nile flows through Rome.
16. The Thames flows through London, or either the Seine flows through Paris or the Nile flows through Rome
17. It is false that the Thames flows through London or that the Seine flows through Paris
18. It is false that the Thames flows through London or that the Nile does not flow through Rome

1.4. cont.

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Recall: about Conjunction

It is True if both are True

Disjunction: is the Reverse

It is False if Both are False  
everything else is True.

# Truth Table of Disjunction

Conjunction

P	q	$P \vee q$	$P \wedge q$
T	T	T	T
T	F	T	F
F	T	T	F
F	F	F	F

T.T. for  $P \vee \sim q$  \* reference  
Table 3

$P$	$q$	$\sim q$	$P \vee \sim q$
T	T	F	T
T	F	T	T
F	T	F	F
F	F	T	T

Let  $p \rightarrow$  Chicago is in Iowa  $\rightarrow F$

$q \rightarrow$  Portugues is the Language of Brazil  $\rightarrow T$

$r \rightarrow 6^2 = 36 \rightarrow T$

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Write the Sentences + find the  
Truth Value of the following.

$r \vee p \rightarrow 6^2 = 36$  or Chicago is in Iowa

$T \vee F \rightarrow T$

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$\sim q \vee p \rightarrow$  Portugues is not the  
Language of Brazil or  
Chicago is in Iowa.

$\sim T \vee F$   
 $F \vee F = F$

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$$\begin{aligned} &PV(q \vee \sim r) \quad \boxed{\text{T.V. only}} \\ &FV(T \vee \sim T) \\ &FV(\underline{T \vee F}) \\ &FV(T) = \underline{\underline{T}} \end{aligned}$$

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$$\begin{aligned} &PV(q \wedge \sim r) \\ &FV(T \wedge \sim T) \\ &FV(\underline{T \wedge F}) \\ &FV(F) = \underline{\underline{F}} \end{aligned}$$

O.T.L.

① pg 14-15: written:  
1-18: Determine the  
Truth Value

② pg 15: 19, 20,