

Quiz: Truth value and truth table (Basic Logic)

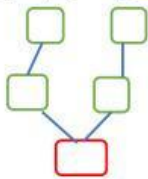
(Note: "t" means true, "f" means false)

1. Fill the truth value in the table.

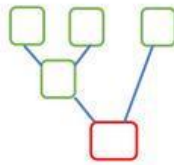
p	q	$p \rightarrow q$	$p \leftrightarrow q$	$p \vee q$	$p \wedge q$

If p, q and w are TRUE and r, s are both FALSE. Find the truth values of the following statements.

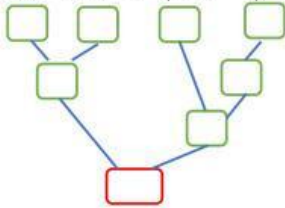
2. $\sim r \vee \sim w$



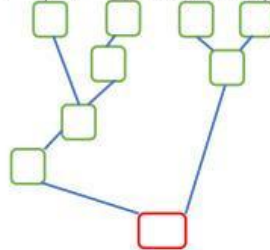
3. $(q \leftrightarrow s) \wedge p$



4. $(w \rightarrow r) \rightarrow (p \wedge \sim q)$



5. $[\sim (p \vee \sim r)] \wedge (w \wedge q)$



6. If $(p \wedge q) \rightarrow \sim r$ is false, then....

p is _____, q is _____, r is _____

7. If $(q \rightarrow p) \vee p$ is false, then

p is _____, q is _____

8. The statements $q \rightarrow p$ and $\sim p \rightarrow \sim q$ are equivalent or not?

p	q	$q \rightarrow p$	$\sim p$	$\sim q$	$\sim p \rightarrow \sim q$
T	T				
T	F				
F	T				
F	F				

Therefore, $q \rightarrow p$ is _____ $\sim p \rightarrow \sim q$

Choose => [equivalent or not equivalent]

9. Construct truth table to find all possible truth value of $(q \rightarrow p) \vee \sim p$

p	q	$(q \rightarrow p)$	$\sim p$	$(q \rightarrow p) \vee \sim p$

10. Construct truth table to find all possible truth value of $\sim (p \vee r) \leftrightarrow q$

p	q	r	$(p \vee r)$	$\sim (p \vee r)$	$\sim (p \vee r) \leftrightarrow q$