NAME: Solutions

This quiz contains 6 problems worth 30 points. You may not use books, notes, or a calculator. You have 30 minutes to take the quiz.

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1. (2 points) Given that p is true, q is true, and r is false, determine the truth value of the proposition $\boxed{\neg p \vee \neg(q \wedge r)}$

$$[(\neg T) \vee \neg(T \wedge F)] \equiv [F \vee (\neg F)] \equiv [F \vee T] \equiv \boxed{T}$$

2. (4 points) Write the truth table for the proposition $\boxed{(p \vee q) \wedge \neg p}$

p	q	$p \vee q$	$\neg p$	$(p \vee q) \wedge \neg p$
T	T	T	F	F
T	F	T	F	F
F	T	T	T	T
F	F	F	T	F

4. (3 points each) Let p be the proposition $\boxed{\text{If } x > 1, \text{ then } x \text{ is not a solution.}}$

(a) State the converse of p.

If x is not a solution, then $x > 1$.

(b) State the contrapositive of p.

If x is a solution, then $x \leq 1$.