

Simplify the following expressions as much as possible using DeMorgan's Law & other identities such as $!!A = A$. Show all of your steps for full credit.

1. $!(num > 0 \ \&\& \ temp \leq 0)$

2. $!(sum < 5 \ || \ !(num > 0))$

3. $!(num > 0 \ \&\& \ num > 0)$

4. $!(!(num > 0) \ || \ temp \leq 0) \ \&\& \ num > 0$

5. $temp \leq 0 \ || \ num > 0 \ \&\& \ (num > 0 \ || \ temp \leq 0) \ || \ temp \leq 0$

6. Complete the truth table below to determine if $B \ || \ A \ \&\& \ (A \ || \ B) \ || \ B$ is equivalent to $A \ || \ B$

A	B	$A \ \ B$	$A \ \&\& \ (A \ \ B)$	$B \ \ A \ \&\& \ (A \ \ B)$
0	0			
0	1			
1	0			
1	1			