

1. Convert the following wff to CNF.

$$p \Rightarrow r \Rightarrow (q \Rightarrow \neg(\neg p \vee r))$$

2. Convert the following formula in CNF into the normal form with implications but no negations.

$$(p \vee q) \wedge \neg r \wedge (\neg p \vee q \vee \neg r \vee s)$$

3. Convert the following CNF formula to a logically equivalent formula in DNF and simplify the result while keeping it in DNF.

$$(\neg p \vee q) \wedge (p \vee \neg r) \wedge (q \vee r \vee s)$$