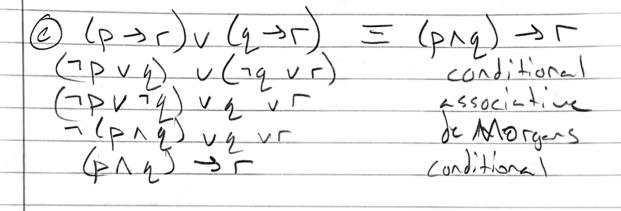
LS 278 Assignment 3 1.5.1 (b) $(\neg p vq) \rightarrow (p \Lambda q)$ $\neg (\neg p vq) \lor (p \Lambda q)$ $(\neg \neg p \Lambda \neg q) \lor (p \Lambda q)$ $(p \Lambda \neg q) \lor (p \Lambda q)$ $p \Lambda (\neg q v q)$ conditional deMorgans distribute/double negative associative Complement Idulity 1.5.2 (P + g) \ (PX) = P + (QNF)

(PP VQ) \ (PXF) \ conditional

P \ (QNF) \ Conditional

P \ (QNF) \ Conditional distributive in my like distribution = 9 -) (PV) PV (9 3F) PV (-9 UF) P (-9 UF) Q 3 (PVF) conditions conditional Conditiona



(PV (-PNg) = -PN-g -((PV-P) N (PVg)) distributive -(TN (PVg)) complement -(PVg) identity' -1PN-7g de Morgens

(p) $(p \wedge \neg r) \vee (p \wedge \neg q \wedge \neg r) \equiv p \wedge \neg r$ $(p \wedge \neg r) \wedge q) \vee ((p \wedge \neg r) \wedge \neg q)$ associative $(p \wedge \neg r) \vee (\neg q \wedge q)$ distributive $(p \wedge \neg r) \vee (\neg q \wedge q)$ complexent $(p \wedge \neg r) \vee (\neg q \wedge q)$ identity