

Discrete Mathematics

Logic and Proof

Pangyen Weng, Ph.D
Metropolitan State University

π

Evaluating Compound Propositions

Evaluating Propositions

- › Evaluate the following if $p = q = T$ and $r = F$.
1. $p \wedge \neg(q \oplus r)$
 2. $r \vee (p \wedge \neg q)$

Example

› Evaluate the following if $p = q = T$ and $r = F$.

1. $p \wedge \neg(q \oplus r)$

2. $r \vee (p \wedge \neg q)$

› **Exercise.** Evaluate $p \oplus (q \wedge \neg r)$

Constructing Truth Tables

› Construct the truth table for

1. $p \vee (\neg q)$

2. $(\neg p \oplus q) \wedge r$

Constructing Truth Tables

› Construct the truth table for

1. $p \vee (\neg q)$

2. $(\neg p \oplus q) \wedge r$

› **Exercise.** Construct the truth table for $p \vee (q \wedge r)$.