

## Sections 1.2 – 1.3 Practice Problems (zyBooks):

1. Construct a truth table for each of these compound propositions:

a)  $p \vee \neg q$

b)  $p \rightarrow (\neg p \vee \neg q)$

2. Use parentheses to show the order of logical operators

$$p \vee \neg q \wedge p \rightarrow r \wedge q$$

3. Let  $p$ ,  $q$ , and  $r$  be propositions:

$p$ : “you get an A on the final exam”

$q$ : “you do every exercise in this book”

$r$ : “you get an A in this class”

Express each of these compound propositions as English sentence.

a)  $q \rightarrow r$

b)  $(p \wedge \neg q) \rightarrow r$

c)  $\neg p \vee q$

4. Translate a given sentence into a logical expression:

a) “You can see the movie only if you are over 18 years old or have the permission of a parent”

b) “I used the wireless network in the airport, but I didn't pay the daily fee”

c) “To use the wireless network in the airport you must pay the daily fee unless you are subscriber to the service”