

Math 270 - Basic Discrete Mathematics
Practice Quiz on Section 2.2
Solutions

Directions: Answer the problems given below.

1. Construct a truth table for the statement form $((\sim p) \wedge q) \rightarrow r$.

p	q	r	$\sim p$	$(\sim p) \wedge q$	$(\sim p) \wedge q \rightarrow r$
T	T	T	F	F	T
T	T	F	F	F	T
T	F	T	F	F	T
T	F	F	F	F	T
F	T	T	T	T	T
F	T	F	T	T	F
F	F	T	T	F	T
F	F	F	T	F	T

2. Write contrapositives for the following statements. (You may assume the variables have fixed values, so these are statements.)

- a. If n is divisible by 12, then n is divisible by 3 and n is even.

If n is not divisible by 3 or is odd, then n is not divisible by 12.

- b. If S is a square, then S is a rectangle.

If S is not a rectangle, then S is not a square.

3. Write a negation for the statement given in 2.a. above.

n is divisible by 12, and n is not divisible by 3 or n is odd.