

1. Given a: $y < 6$
 b: $y > 1$

Let the domain = $\{1, 2, 3, 4, 5, 6, 7, 8\}$

- a) For what values of y is $a \wedge b$ true? _____
- b) For what values of y is $a \vee b$ true? _____

2. Given r: I am an honor student.
 s: I play football.

Write the statement represented by each of the following:

- a) $\sim r$ _____
- b) $r \wedge s$ _____
- c) $r \wedge \sim s$ _____
- d) $\sim r \wedge s$ _____
- e) $r \vee s$ _____
- f) $r \vee \sim s$ _____

3. Create the following truth table for the statements given in problem 2.

r	s	$\sim r$	$\sim s$	$r \wedge s$	$r \wedge \sim s$	$\sim r \wedge s$	$r \vee s$	$r \vee \sim s$
T	T							
T	F							
F	T							
F	F							