

Math 116: Written Homework Set 9

This assignment is due on Monday, November 14th in class. Show all work where possible! Answers magically appearing will receive no credit.

1. Which of the following are statements?
 - a. Roses have thorns.
 - b. Carnations with long stems.
 - c. Daffodils or tulips?
 - d. Don't eat the roses.
2. Let p = 'Trout are fish' and q = 'Fish live in trees'. Symbolize each of the following:
 - a. Trout are fish or fish live in trees.
 - b. Trout are fish and fish do not live in trees.
 - c. If trout are not fish then fish live in trees.
 - d. It is not true that either trout are fish or fish live in trees.
3. Construct truth tables for the following.
 - a. $\sim p \wedge q$
 - b. $p \vee \sim q$
 - c. $\sim p \rightarrow \sim q$
 - d. $(p \wedge \sim q) \rightarrow (\sim p \wedge q)$

Selected Answers

1. a. Is a statement.
c. Not a statement. Is a question.

2. a. $p \vee q$
c. $\sim p \rightarrow q$

3. a.

$\sim p \wedge q$
F
F
T
F

c.

$\sim p \rightarrow \sim q$
T
T
F
T