

Quiz 2

MGF 3301 Intro. to Adv. Math

Student's Name: _____

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January 16, 2014

This is a 30 minute quiz. Discuss the problems in your group, and then write down your own answer. You may also use the back side of the quiz.

1. Determine whether the following statements are equivalent using truth tables.

$$(A \vee B) \wedge C \quad (A \wedge C) \vee (B \wedge C).$$

2. Which of the following gives a negation of the sentence: Jack and Jill like to eat ice cream.
 - (a) Neither Jack nor Jill like to eat ice cream.
 - (b) Either Jack or Jill dislikes eating ice cream.
 - (c) Jack doesn't like to eat ice cream and Jill doesn't like to eat ice cream.
 - (d) Either Jack doesn't like to eat ice cream or Jill doesn't like to eat ice cream.

Use symbolic notation (using A, B, \sim, \vee, \wedge to write the sentence and its negation.

3. Think of a sentence with two quantified variables which is true, but the sentence that you get when you switch the quantifiers is false. Write down the two sentences.