

MA 110-07  
§1.1 - 1.3

# Quiz #1

score

Name: \_\_\_\_\_

30 August 2001

1. State whether the following argument is VALID or INVALID and illustrate with a properly labeled Venn diagram. (6 points)

1. All tennis players are good athletes.
2. Sue is a good athlete.

\_\_\_\_\_  
Therefore, Sue is a tennis player.

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2. Using the symbolic representations

$p$ : I take piano lessons;  
 $q$ : I practice piano often;  
 $r$ : I play the piano well.

- (a) express the sentence "If I take piano lessons and if I practice the piano often, then I will play the piano well." (4 points)

- \_\_\_\_\_  
(b) Express the symbolic expression in words:  $(\sim p \wedge \sim q) \rightarrow \sim r$ . (4 points)

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3. Construct truth tables for the two statements  $p \rightarrow (\sim q)$  and  $\sim(p \wedge q)$  and determine if the two statements are logically equivalent. (6 points)