

MA 110-02 §1.1 - 1.4	<b>Quiz #1</b>	<i>score</i>	Name: _____ <p style="text-align: right;"><b>11 June 2001</b></p>
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1. Use a properly labeled Venn diagram to determine the validity of the following argument. Explain. (5 points)

1. All mathematicians are nerds.
2. Jim is a nerd.

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Therefore Jim is a mathematician.

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2. Using the symbolic representations

- $p$ : I am well-organized;  
 $q$ : I work hard;  
 $r$ : I will succeed;

express the sentence "If I do not work hard or if I am not well-organized, then I will not succeed." (5 points)

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3. Construct a truth table for the statement  $(p \wedge q) \rightarrow (p \vee q)$  and determine if the statement is a tautology. (5 points)

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4. Write the contrapositive of the statement "If I study regularly, then I will do well." (5 points)