

# Math 2283 - Introduction to Logic

## Quiz #3 - 2010.09.01

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

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Determine if each of the following statements are true or false. If false, give an example which makes the statement false. If true, then given an argument as to why it is true.

1. If  $x$  is divisible by 3 or divisible by 4, then  $x$  is divisible by 12.

2. If  $x$  is divisible by 3 and 4, then  $x$  is divisible by 12.

3. If  $x$  is divisible by 12, then  $x$  is divisible by 3 and 4.

4. If  $x$  is divisible by 12, then  $x$  is divisible by 3 or divisible by 4.

5.  $x$  is divisible by 12 iff  $x$  is divisible by 3 and 4.