

# Math 200 - Quiz 10

November 14, 2012

Name \_\_\_\_\_

Score \_\_\_\_\_

Show all work to receive full credit. Supply explanations when necessary.

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1. (1 point) Is the following statement true or false? If false, give a counterexample.

If  $x \mid 12$ , then  $x \mid 6$ .

2. (1 point) Scotty posed the following test for divisibility by 24: *A whole number is divisible by 24 if and only if it is divisible by both 4 and 6.* Give a counterexample to show the test is not valid.

3. (2 points) Test 878460 for divisibility by 2, 3, 4, 5, 6, 8, 9, 10, and 11.

4. (1 point) Find the prime factorization of 2520.