

# Math 2315 - Calculus II

Homework #2

Assigned - 2010.01.20

Due - 2010.01.25

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

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Textbook problems:

Section 6.2 - 1, 4, 19, 22, 37, 38, 43

Section 6.3 - 1, 2, 5, 7, 10, 13, 14, 19, 24, 27, 30, 34, 35, 38, 51, 54, 56, 57, 60

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Fun Problems:

1. Show that if  $f(x)$  is odd and  $f^{-1}(x)$  exists, then  $f^{-1}(x)$  is odd.
2. Argue that an even function cannot have an inverse on an interval which contains the origin.
3. Prove that if  $\lambda < 0$ , the equation  $e^x = \lambda x$  has a unique solution.