

**Math 207 Quiz #4**  
**April 26, 2011**

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

Show all work and answers on a separate sheet. Put a box around your final answer.

1. (5 pts.) Find the general solution to the equation  $\frac{dy}{dx} - \frac{4y}{x} = \frac{y^2}{x^3}$ . (You can leave your answer written implicitly.)
2. (5 pts.) A container initially contains 50 liters of solution that is 10% bleach. Liquid that is 1% bleach is then pumped in at a rate of 4 liters/min. At the same time, liquid flows out of the container at a rate of 4 liters/min.

When will the bleach in the container be reduced by half of the initial amount of bleach present?  
(Assume the liquid is well-mixed in the container and round your answer to two decimal places.)

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