

Math 181  
Fall 2009

Name \_\_\_\_\_

Homework #12

Due Wednesday, October 14

No late papers accepted! No excuses!

A 200 gallon tank is half full of distilled water. At time  $t = 0$ , a solution containing 0.5 pounds per gallon of concentrate enters the tank at the rate of 5 gallons per minute, and the well-stirred mixture is withdrawn at the rate of 3 gallons per minute.

- a) At what time will the tank be full?
- b) At the time the tank is full, how many pounds of concentrate will it contain?