MthSc 208: Differential Equations (Spring 2011)
In-class Worksheet 2c: Mixing problems

NAME:

Write down an initial value problem for each of the following mixing problems.

1. A tank contains 100 gallons of water, in which 20 oz of salt is dissolved. Water with a concentration of 3 oz/gal flows into the tank at a rate of 5 gal/min, and water drains from the tank at the same rate.

2. A tank contains 100 gallons of salt water that has a salt concentration of 1 oz/gal. Fresh water flows into the tank at a rate of 5 gal/min, and water drains from the tank at 7 gal/min.