

Math 321

CLASS EXERCISES, 5 MARCH 2018

A large tank contains 200 gallons of a salt solution. At time zero a 0.3 pounds per gallon salt solution begins flowing into the tank at 8 gallons per minute. At the same time thoroughly mixed solution is being removed from the tank at the same rate.

1. Use this information to write the differential equation modeling this situation, letting A be the amount of salt in the tank at any time t , where A is in pounds and t is in minutes.
2. Solve the differential equation. You have learned three different ways to do this - take your pick!