Mixture Problems

1. A chemist has one solution that is 10% salt and 90% water and another solution that is only 2% salt. How many milliliters of each should the chemist use to make 1400 ml of a solution that is 6% salt? (700 ml of each)

2. A pharmacist has one solution that is 10% iodine and another that is 50% iodine. How much of each should the druggist use to get 100 milliliters of a mixture that is 20% iodine? (75 ml and 25 ml)

3. How much water must be evaporated from 100 gallons of a 10% brine solution to get a 20% brine solution? (50 gal)

4. When Frank and Mark finished milking, they found that they had 900 pounds of milk that was 2% butterfat. How much butterfat did they have to add to raise the butterfat content to 10%? (80 pounds) 5. The vat contained 40 liters of a 5% salt solution. How much of a 20 % salt solution should be added to get a 10% salt solution? (20 liters)

6. Somehow salt found its way into the rain barrel, for the 50 gallons of water it contained was found to be 4% salt. How much pure water must be added to reduce the salt content to 1%? (150 gal)

Two containers are on the shelf. The first one contains a 30% iodine solution and the other contains an 80% iodine solution. How much of each should be used to get 50 liters of a solution that is 40% iodine? (40 L and 10 L)

8. The solution came up to the 500-ml mark on the beaker. If the solution was 84% alcohol, how much alcohol should be evaporated so that what is left would be only 80% alcohol? (100 ml)