Name: _____   **Class:** _____

AU5: Homework #6 – Linear Word Problems   **Date:** _____

#1.   The sum of two numbers is 30. The sum of the greater number and three times the lesser number is 54. Find the numbers.

#2.   The larger of two numbers is 5 more than twice the smaller. If the smaller is subtracted from the larger, the result is 12. Find the numbers.

#3.   The total attendance at a school play was 1250. The cost of tickets was $6.00 for students and $7.50 for adults. The school drama club had a revenue total of $8362.50. How many of each ticket was sold for the play?

#4.   Maria spent a long day working the cash register at Musicville during a sale on CDs. For this sale, all CDs in the store were marked either $12 or $10. Just when she thought she could go home, the store manager gave Maria the job of figuring out how many CDs they had sold at each price, so they could write the total in the store records. Maria doesn't want to sort through hundreds of sales slips, so she decided on an easier way. The counter at the exit of the store says that 500 people left with CDs (limit one per customer) during the sale, and the cash register contains $5750 from the days sales. Maria wrote a system of equations for the number of $10 CDs and the number of $12 CDs.

A) What was the system of equations?

B) How many CDs were sold at each price?

#5.   Your teacher is giving a test worth 150 points. There are 46 three- and five- point questions. How many of each type are on the test?

#6.   One car model costs $12,000 and costs an average of $0.10 per mile to maintain. Another car model costs $14,000 and costs an average of $0.08 per mile to maintain. If one of each model is driven the same number of miles, after how many miles would the total cost be the same?

#7.   At a recreation and sports facility, 3 members and 3 nonmembers pay a total of $180 to take an aerobics class. A group of 5 members and 3 nonmembers pay $210 to take the same class. How much does it cost members and nonmembers to take an aerobics class?

#8.   A plane takes about 6 hours to fly you 2,400 miles from New York City to Seattle, Washington. At the same time, your friend flies from Seattle to New York City. His plane travels with the same average airspeed, but his flight takes 5 hours. Find the average airspeed of the planes. Find the average wind speed.