Algebra II Worksheet #7 Unit 2 page 1 _____

Solve each of the problems algebraically. **Use a system of 2 equations with 2 variables.**

1. Sue won a $200 gift certificate from a local music store. She could use the entire amount to get 12 CD's and 4 cassettes. If she got 10 CD's and 6 cassettes she would have $10 left on the gift certificate. How much does each CD and each cassette cost?

2. When Harry rows with the current, he can row 24 miles in 3 hours. When he rows against the same current, he can row only 18 miles in 4 hours. Find the speed of the current and Harry's rowing rate in still water (assuming both are constant).

3. Mary invested a total of $20,000, part at 8% per year and the remainder at 6% per year. If the total interest for one year was $1440, then how much did she invest at each rate?

Algebra II Worksheet #7 Unit 2 page 2

Solve each of the problems algebraically. **Use a system of 2 equations with 2 variables.**

4. The units digit of a two digit number is one less than twice the tens digit. If the order of the digits is reversed, the new number formed is 18 more than the original number. What is the original number?

5. 148 tickets were sold for a school play. Adult tickets cost $3 each, and student tickets cost $2 each. If the total revenue from the sales was $359, then how many tickets of each type were sold?

6. A nursery owner has clover seed worth 30 cents per pound and alfalfa seed worth 15 cents per pound. How many pounds of each should the owner use to make a 300 pound mixture worth 20 cents per pound?

Algebra II Worksheet #7 Unit 2 page 3

Solve each of the problems algebraically. **Use a system of 2 equations with 2 variables.**

7. Five pizzas and three liters of soda cost $19.60. Eight pizzas and 4 liters of soda cost $30.40. What is the cost of one pizza? What is the cost of one liter of soda?

8. The sum of two numbers is 10. The first number is one less than three times the second. What are the numbers?

9. A collection of ordinary dimes and nickels is worth $10. The number of nickels is 5 more than 3 times the number of dimes. How many coins of each type are in the collection?