Algebra 2

1.3 - Solving Systems with 3 Variables using Matrices

Name: _____

Date: _____ Period: _____

For each word problem...

    a.) Define Variables   **b.) Setup System of Equations**

    c.) Setup Matrix Equation   **d.) Use matrices to solve**

1.) Tasty Bakery sells three kinds of muffins: chocolate chip muffins at 40 cents each, oatmeal muffins at 45 cents each, and cranberry muffins at 50 cents each. Charles buys some of each kind and chooses three times as many cranberry muffins as chocolate chip muffins. If he spends $7.95 on 17 muffins, how many chocolate chip muffins did he buy?

2.) The state fair sold admission tickets in a price range of 3 different age groups: adults, teens, and children. The adult price was $16, the teen's price $6, and the child's price $4. A group of 26 people attended the fair together. The total price for all of them to enter the fair was $214. The number of teens in the group was double of the adults and children combined. How many adults, teens, and children were in the group?

3.) Danielle has five dollar bills, ten dollar bills, and twenty dollar bills worth 205 dollars. The number of ten dollar bills is 3 times less than the sum of the five dollar bills and twenty dollar bills. How many of each time of coin does Danielle have if there are 17 dollars in all?

4.) For the birthday party this friday the balloon colors are Freds favorite colors red, blue, and green. The red ballons cost $2.50 each the blue $1.75 and the green is $1 each. Fred has a total of 23 people coming over and everyone gets a balloon including Fred. There are 3x's the amount of red ballons as there are blue and the blue is twice the amount of the green. The total amount the ballons cost were $48. How many red, blue, and green ballons are there?