Word Problems: Systems of Equations   Name: _____

Set up a system of equations for each problem. Then, solve each system by whatever mathematical means you like.

1) Julio bought tables and chairs for his restaurant. He bought 16 total items and spent $1800. Each table cost $150 and each chair cost $50. Let x represent the number of tables and y represent the number of chairs. How many tables and chairs did he buy?

2) Mrs. Flips sold 300 cookies for her bake sale. She sold two types of cookies: large chocolate chip and small peanut butter cookies. She charged $1 for the chocolate chip and 50-cents for the peanut butter cookies and collected $270 total. How many of each type did she sell?

3) Paco's Tacos sold 280 food items from its mobile unit. Only tacos ($2 each) and burritos ($3 each) were available. It took in $660 in sales. How many tacos and how many burritos did it sell?

4) Penelope's Printing Press promptly sold 5-cent pencils and 10-cent pens to the public. It sold 1000 writing utensils and took in $74.50 in sales. How many pens and how many pencils did Penelope's Printing Press sell?

5) Joey "Goodfella" Branzolli liked to shuffle music as a disk jockey. He had 80 CDs, which were rock and rap CDs. He bought his CDs at a bulk rate: $4 for rock and $3 for rap CDs. If his collection was worth $292, how many of each type of CD did he own?

6) Hilda owns her own landscaping company. She mows commercial and residential lawns and mows the lawns every week, which is a total of 120 lawns. She charges $40 for commercial and $20 for residential accounts. Every week, she takes in $2620 in revenue. How many accounts of each type does she manage?

7) Dianne manufactures Mexican and American flags. Due to the costs of color, she charges $20 for Mexican flags and $15 for American flags. She sold twenty-eight flags and accumulated $460. How many flags of each type did she sell?

8) Radio Tower had a special on rechargeable batteries. It sold AA for $1 and AAA for $0.75. It sold 42 batteries on a single day and received $37. How many batteries and of which type were sold?

Joel had a coin collection. He had thirty coins, which were nickels, dimes, and quarters. He had twice as many quarters as dimes. The face value of his collection was worth $3.75.

Equation 1:

Equation 2:

Equation 3:

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Examples:

A) Franklin sold water bottles in two sizes, large ($2.50 each) and regular ($1 each). He sold 113 bottles altogether and collected $221 dollars. How many bottles of each type did he sell?

B) Kimberly ran an amusement park with large animals. She charged $20 for horse rides and $50 for elephant rides. Fifty-five rides were offered and $2000 was collected. How many rides of each type were offered?

C) The Osiris Diamond Company sold two types of diamonds, marque cut for $1200 and princess cut for $1800. It sold seventy-five diamonds during a sales campaign for Christmas. It received $112,200 in sales. How many diamonds were sold of each type?