Algebra 2   Name: _____
Solving a Word Problem using a Matrix and Calculator   Date: _____

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Use this answer sheet to organize your work and answer the question.

1. (#17). Fill in the table below and then write out the equation you would use to solve the problem. Use an augmented matrix to solve.

How much does each item cost?

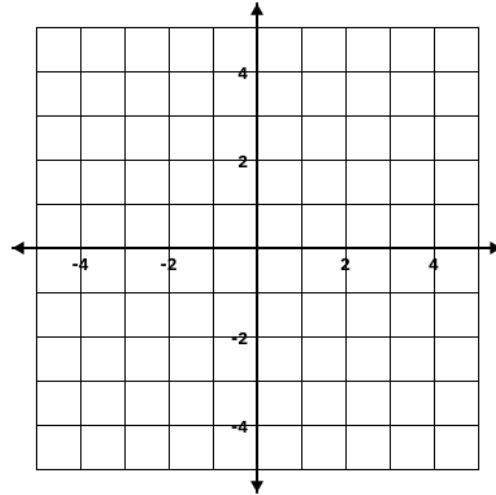| Order #	Pizza x	Soda y	Salad z	Total $
#1				
#2				
#3				

2. (#18). Fill in the table below and then write out the equation you would use to solve the problem. Use an augmented matrix to solve.

What is the price of each piece of furniture?

Sofa x	Love seat y	Chair z	Total $

3. Solve the system of equations in two variables by GRAPHING and finding the point of intersection. Hint: rewrite as $y = mx + b$.

$x + y = 0$
$3x + 2y = 1$

4. CALCULATOR: According to legend, in 1589, the Italian scientist Galileo Galilei dropped rocks of different weights from the top of the Leaning Tower of Pisa to prove his conjecture that the rocks would hit the ground at the same time. The height h (in feet) of a rock after t seconds can be modeled by $h(t) = 196 - 16t^2$.

From what height did Galileo drop the rocks?

How long did it take the rocks to hit the ground?

5. Solve the System in 3 variables by the ELIMINATION method. Write your answer as an ordered triple, (x, y, z).

$x + y + z = 24$
$5x + 3y + z = 56$
$x + y - z = 0$