Math 1050 – Sullivan Chapter 12 Lab

In Chapter 12 we found out how to solve systems of equations using the following matrix methods:

a. Gaussian Elimination

b. Gauss/Jordan Method

c. Inverse method

d. Cramers rule

1. Discuss when you would and would not use each method.

2. Discuss how you would know if you have one answer, no answer or many answers with each method.

3. Solve the following system with each method:

$$\frac{1}{2}x + \frac{1}{4}y - z = 2$$
$$\frac{2}{3}x + \frac{1}{4}y + \frac{1}{2}z = \frac{3}{2}$$
$$\frac{2}{3}x + z = -\frac{1}{3}$$

4. How many answers would you look for in each of the following systems of equations?

a.
$$y = 6 - x^2$$
$$y = x^2 - x$$

b.
$$x^2 + y^2 = 36$$
$$49x^2 + 36y^2 = 1764$$

c.
$$6x^2 + 8y^2 = 182$$
$$8x^2 - 3y^2 = 24$$

5. Solve each system in #4 above