Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Unit 3 Review – Systems of Equations**

**Helpful Information:**

The solution(s) to a system of equations is where the graphs intersect

**2 x 2 Systems**

Solutions contain (x,y)

Look for multiple solutions

Can be solved algebraically or graphically

**3 x 3 Systems**

Solutions contain (x,y,z)

Look for a single solution

Only solved *algebraically* w/ elimination method

**Level I Practice:**

1. When  and  are graphed on the same set of axes, which coordinates best approximate their point of intersection?

|  |  |
| --- | --- |
| 1) |  |
| 2) |  |
| 3) |  |
| 4) |  |

1. Solve the following system of equations algebraically:

$$-5x-y-4z=60$$

$$2x+4y+3z=-12$$

$$6x-3y-2z=-52$$

1. Solve the following system of equations algebraically:

$$3x+4y=8$$

$$x-3y=-6$$

**Level II Practice:**

1. Which value, to the *nearest tenth*, is *not* a solution of  if  and ?

|  |  |
| --- | --- |
| 1) |  |
| 2) |  |
| 3) | 2.1 |
| 4) | 4.7 |

1. What is the solution to the system of equations  and  where  is defined by the function below?



|  |  |
| --- | --- |
| 1) |  |
| 2) |  |
| 3) |  |
| 4) |  |

1. Solve the following system of equations algebraically:

$$4a+5b-6c=2$$

$$-3a-2b+7c=-15$$

$$-a+4b+2c=-13$$

**Level III Practice:**

1. Solve the system of equations shown below algebraically.



1. A friend e-mails you the results of a recent high school swim meet. The e-mail states that 24 individuals placed, earning a combined total of 53 points. First place earned 3 points, second place earned 2 points, and third place earned 1 point. There were as many first place finishers as second and third place finishers combined.
	1. Write a system of three equations to represent how many people finished in each place.
	2. How many swimmers finished in first place, second place, and third place, respectively?