

Name: _____

Date: _____ Per: _____

Unit 6 Review – Systems of Equations

Station 1: Graphing

<p><u>Basic:</u></p> <ol style="list-style-type: none">1) Use the calculator to find the linear and quadratic equations of each problem provided.2) Write the solutions to the graph in the space provided.	<p><u>Challenge:</u></p> <ol style="list-style-type: none">1) Given the solutions write a linear and quadratic equation to fit the coordinates (both lines must intersect both points)
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Station 2: Substitution VS. Elimination

<p><u>Basic:</u></p> <p>Solve the problems provided using EITHER elimination or substitution.</p>	<p><u>Challenge:</u></p> <p>Using the iPad create a whiteboard video (using the ShowMe App) about how to solve an example problem. For instructions, see the class website Algebra 2 assignments</p> <p>In the video you must explain these things:</p> <ol style="list-style-type: none">1) Why you think your method is mathematically better2) Use your chosen method to work through an example problem
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Station 3: Vocab

<p><u>Physical:</u></p> <p>Create flash cards with the following 8 vocab words</p> <p>Each card must have a</p> <ul style="list-style-type: none">-Definition (that you write)-Picture	<p><u>Digital:</u></p> <p>Create a Quizlet with the following 8 vocab words</p> <p>Each card must have a</p> <ul style="list-style-type: none">-Definition-Picture
<ul style="list-style-type: none">○ Substitution○ Elimination○ Quadratic○ Inequality	<ul style="list-style-type: none">○ System of inequalities○ System of equations○ Solution Set○ Linear

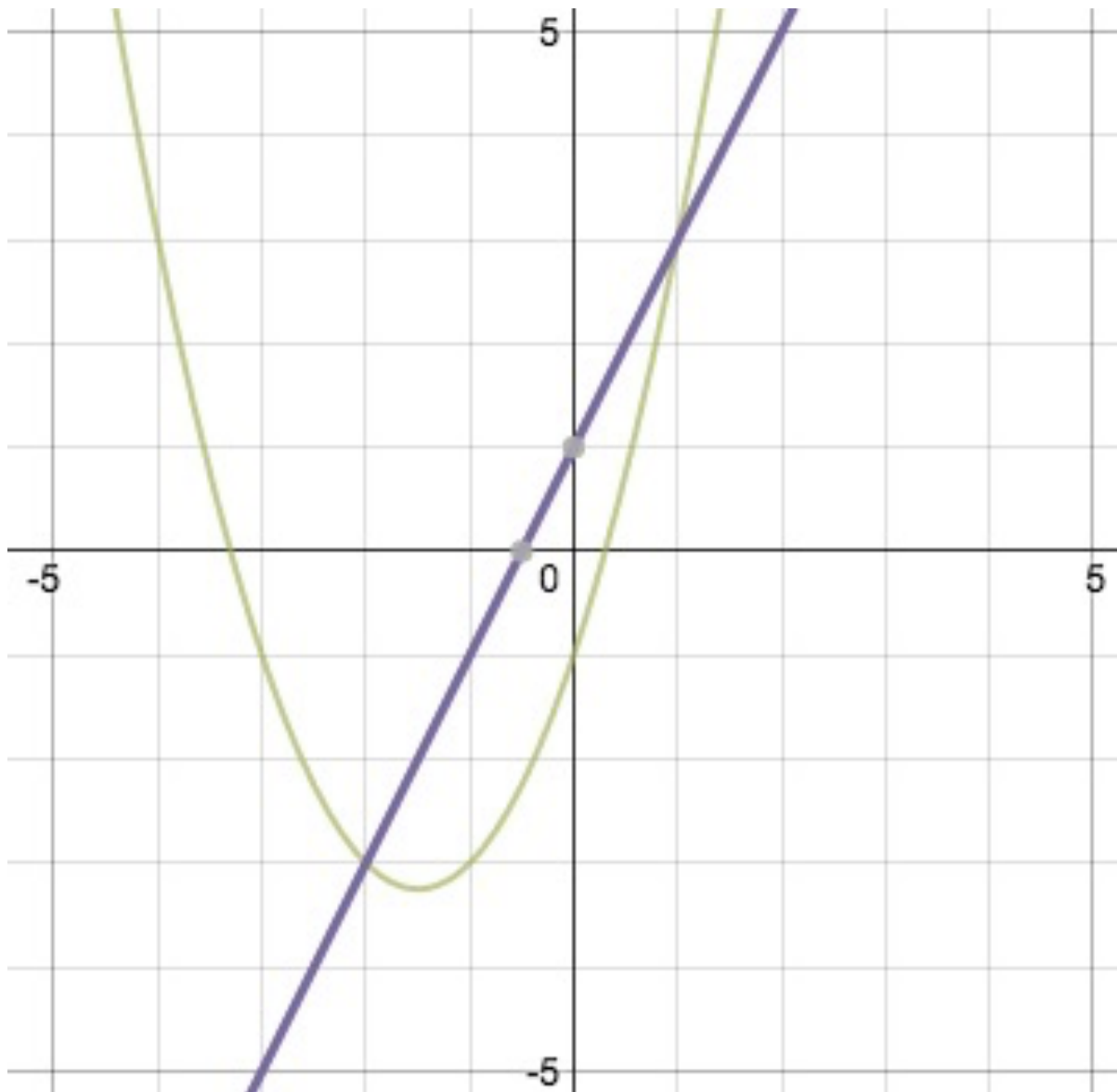
Station 4: Systems of Inequalities

Graph each of the system of inequalities; don't forget to shade the correct region.

Station 5: Solving systems with 3 variables

<p><u>Basic:</u></p> <p>Solve 3 of the problems that have a simple solving variable</p>	<p><u>Challenge:</u></p> <p>Solve 1 of the problems with no simple solving variable.</p>
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Graphing #1

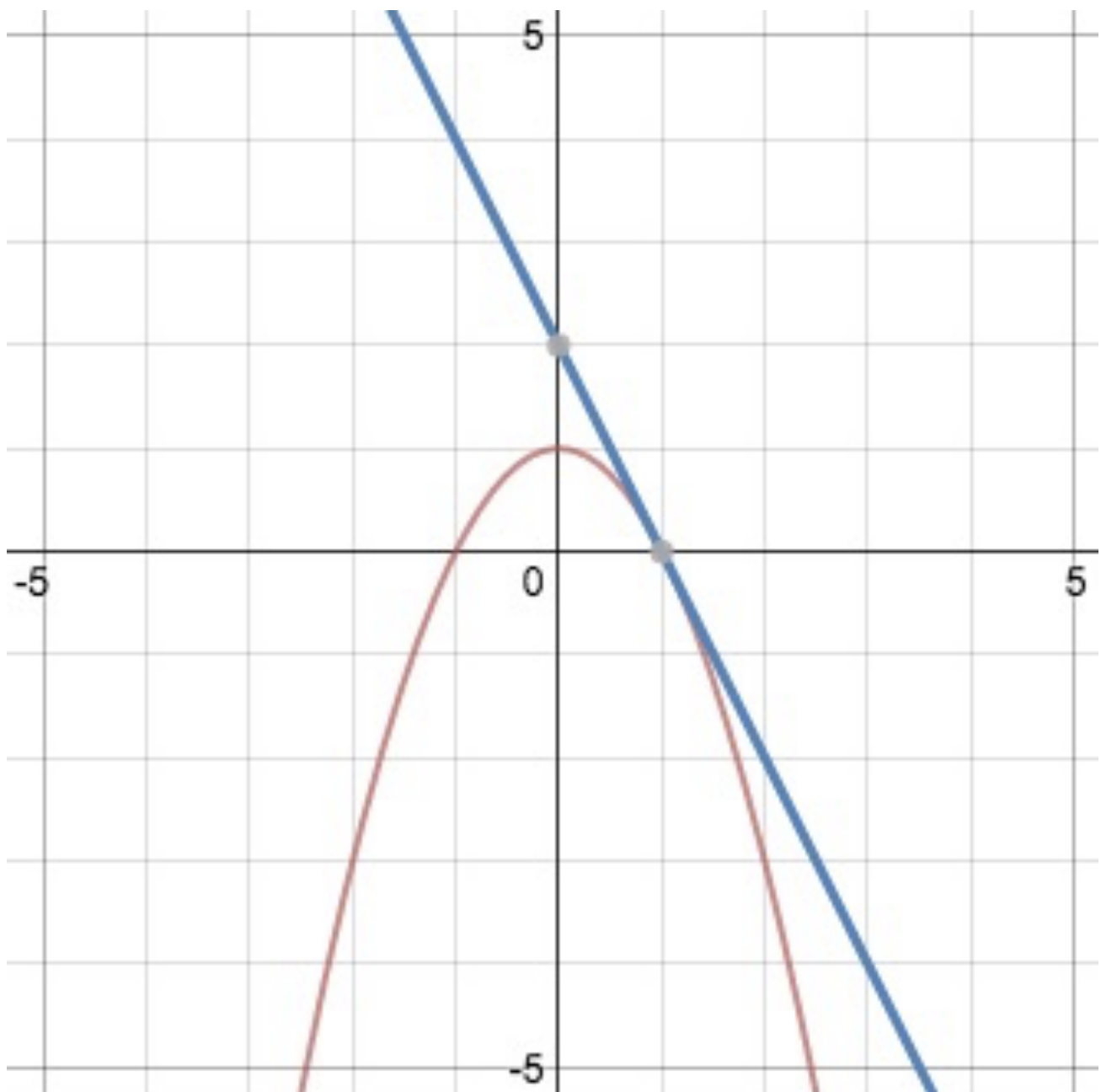


Solution(s): _____

Quadratic Eq: _____

Linear Eq: _____

Graphing #2

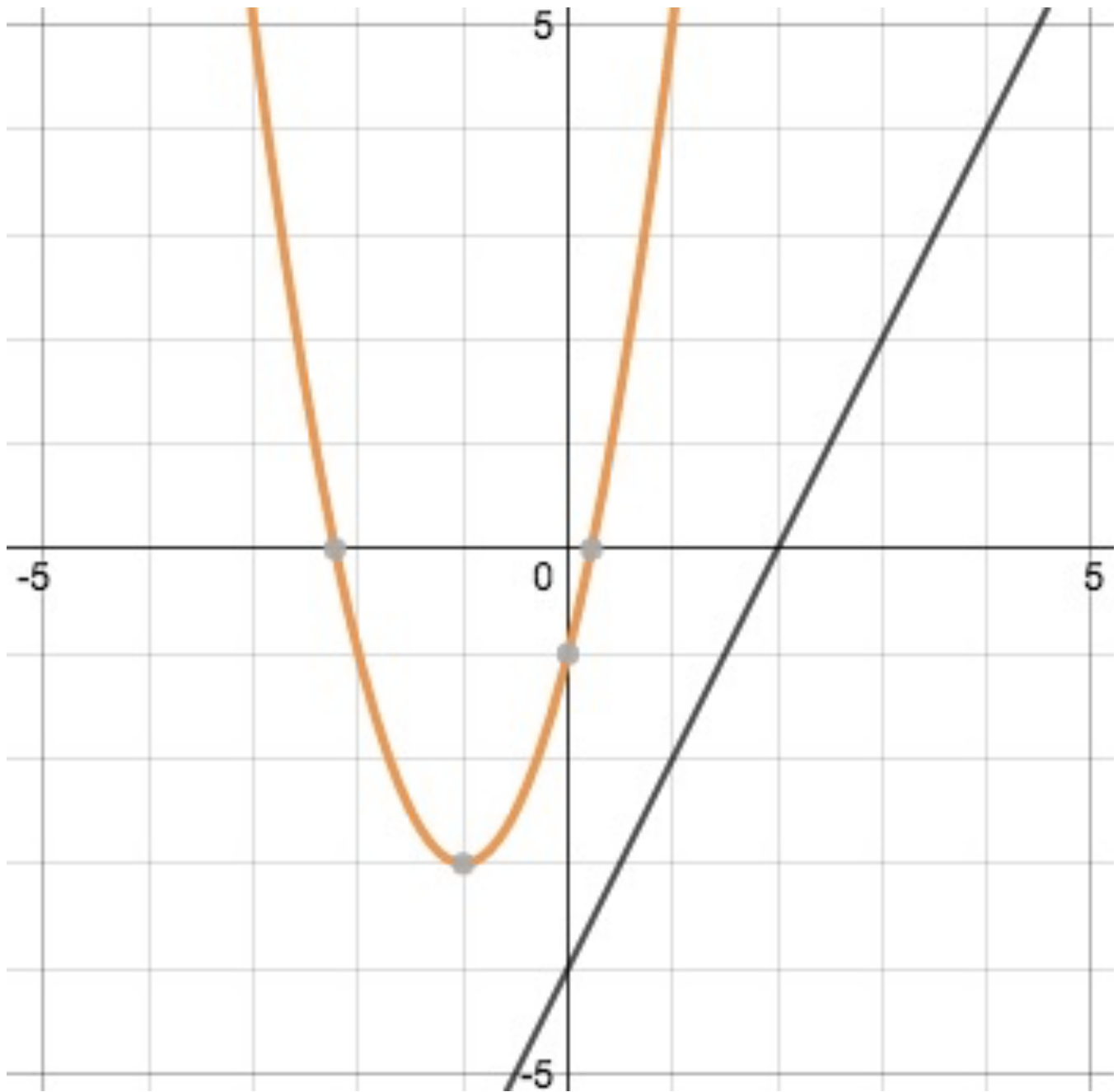


Solution(s): _____

Quadratic Eq: _____

Linear Eq: _____

Graphing #3

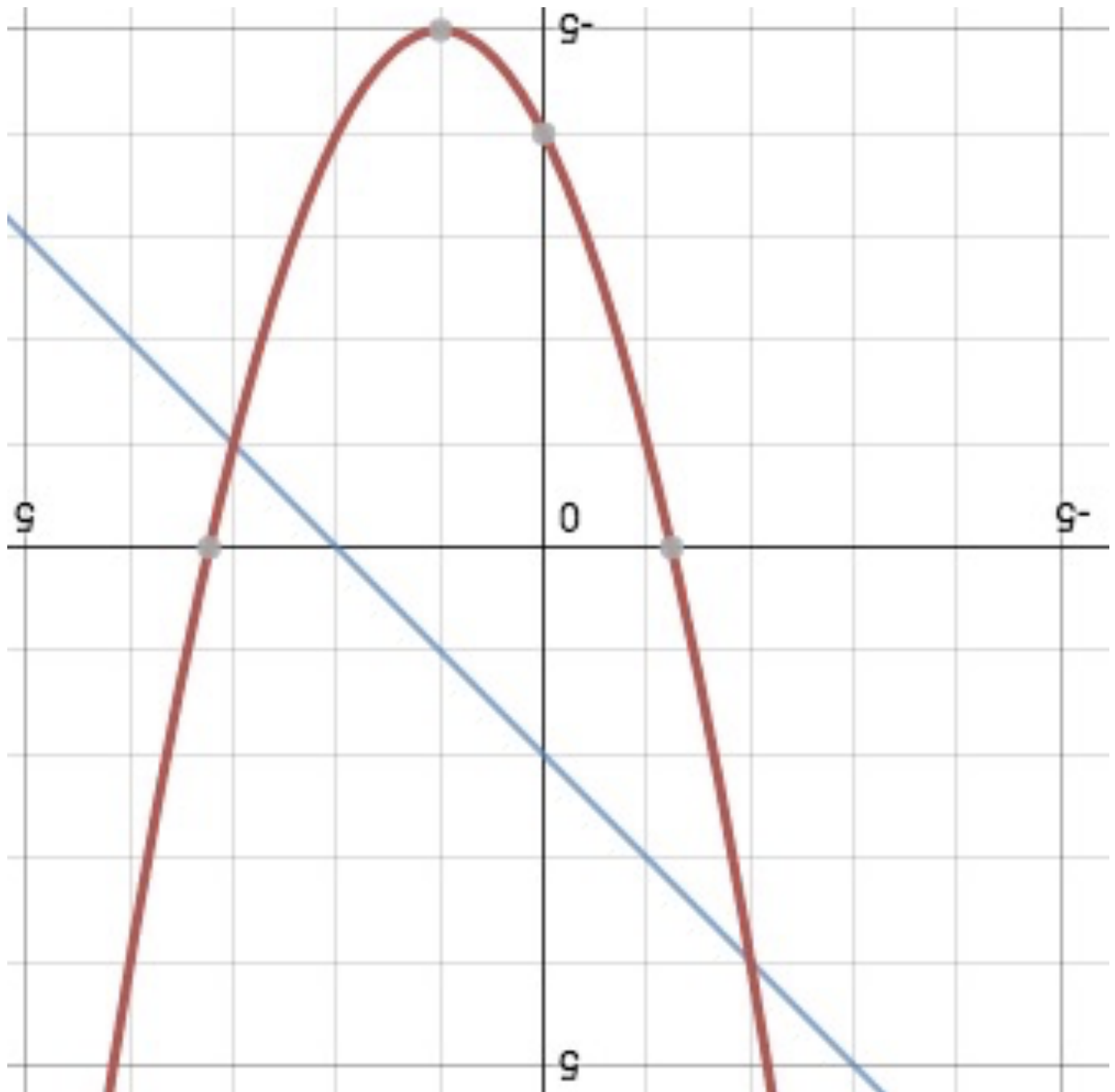


Solution(s): _____

Quadratic Eq: _____

Linear Eq: _____

Graphing #4 (Both)



Solution(s): _____

Quadratic Eq: _____

Linear Eq: _____

Graphing Basic Problems:

Graph and Solve on the review provided.

5. $y = 2x + 2$ and $y = x^2 + 3$

6. $y = -x + 5$ and $y = x^2 - 2x - 1$

7. $y = -x + 4$ and $y = x^2 - 6x - 1$

8. $y = 2x$ and $y = 2x^2 + 4x + 3$

-OR-

Graphing Challenge Problems:

Write a linear and quadratic equation that has the set of coordinates as a solution

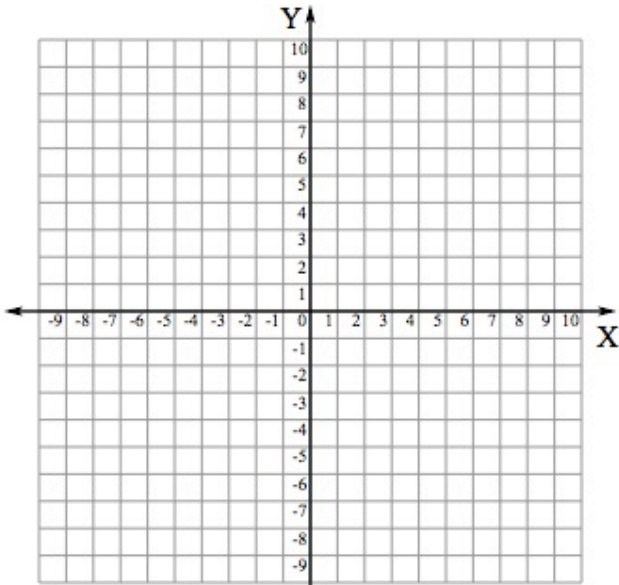
5. $(-1, -1)$

6. $(1, 2)$ and $(-1, 2)$

7. $(2, 4)$ and $(-3, 1)$

8. $(-2, -2)$ and $(1, -4)$

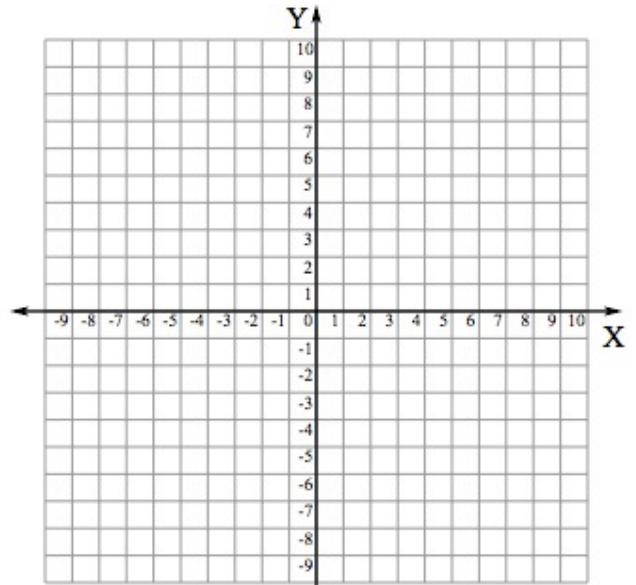
Student graphing page #5-8



Solution(s): _____

Quadratic Eq: _____

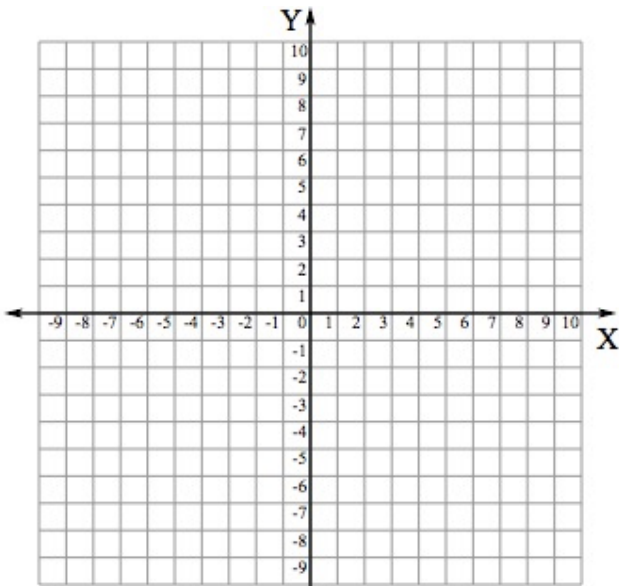
Linear Eq: _____



Solution(s): _____

Quadratic Eq: _____

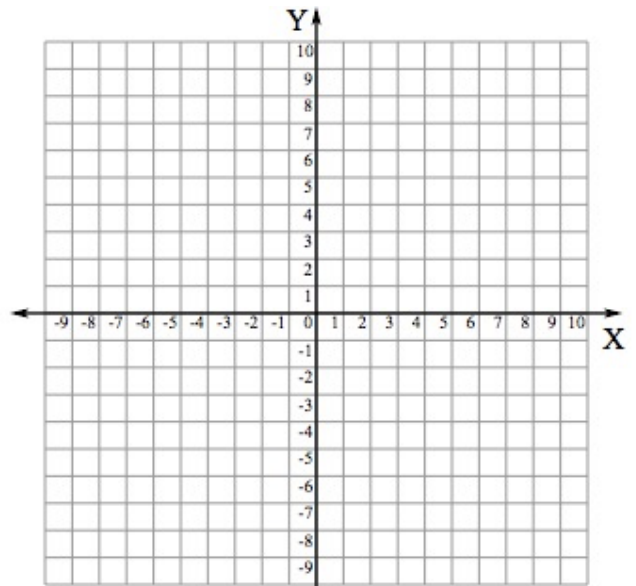
Linear Eq: _____



Solution(s): _____

Quadratic Eq: _____

Linear Eq: _____

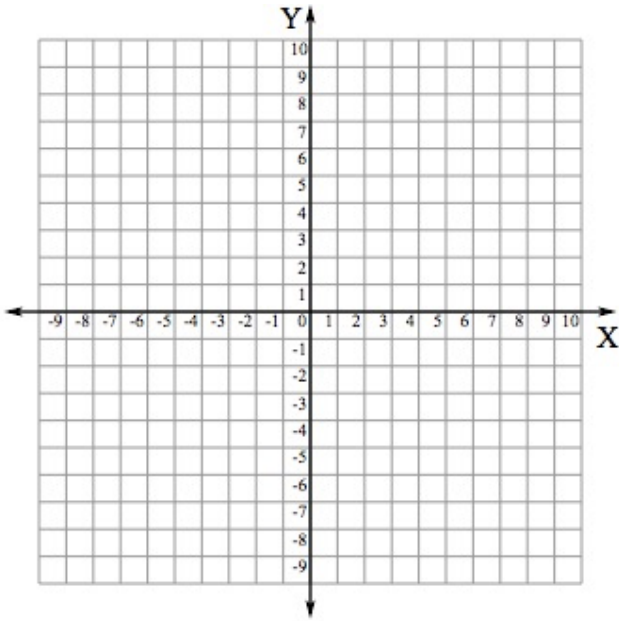


Solution(s): _____

Quadratic Eq: _____

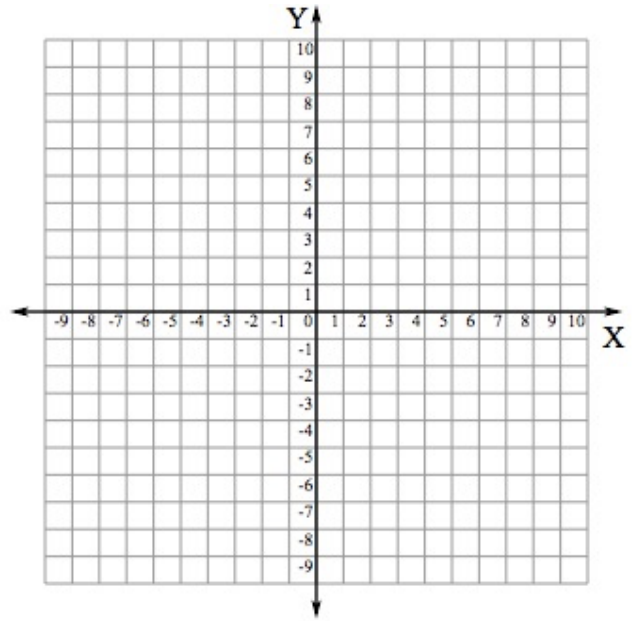
Linear Eq: _____

Student Inequality page



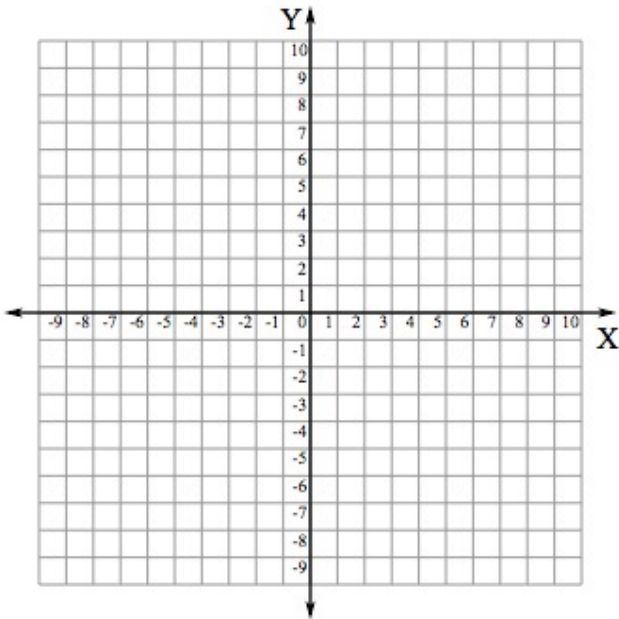
Quadratic Eq: _____

Linear Eq: _____



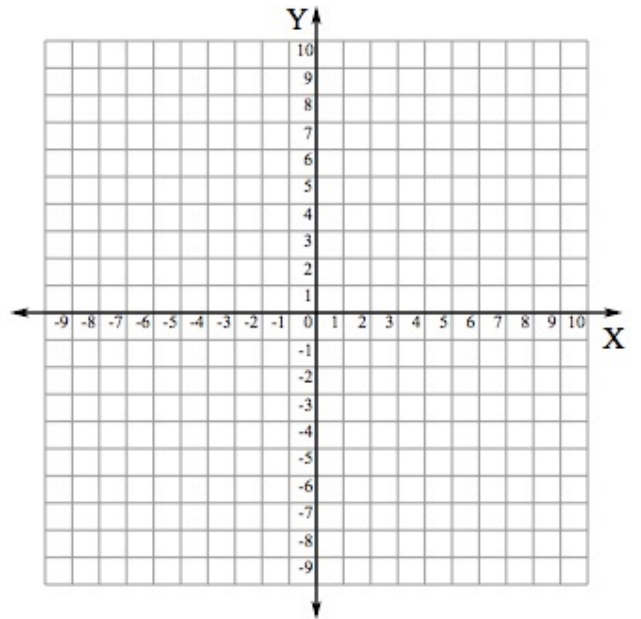
Quadratic Eq: _____

Linear Eq: _____



Quadratic Eq: _____

Linear Eq: _____

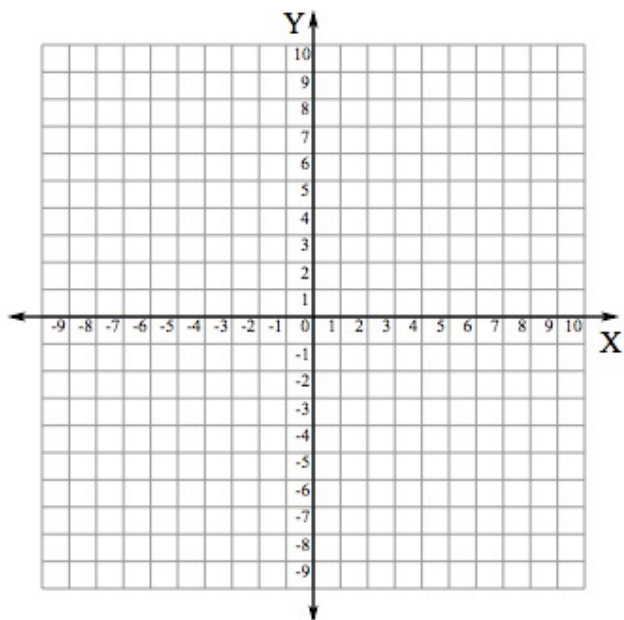


Quadratic Eq: _____

Linear Eq: _____

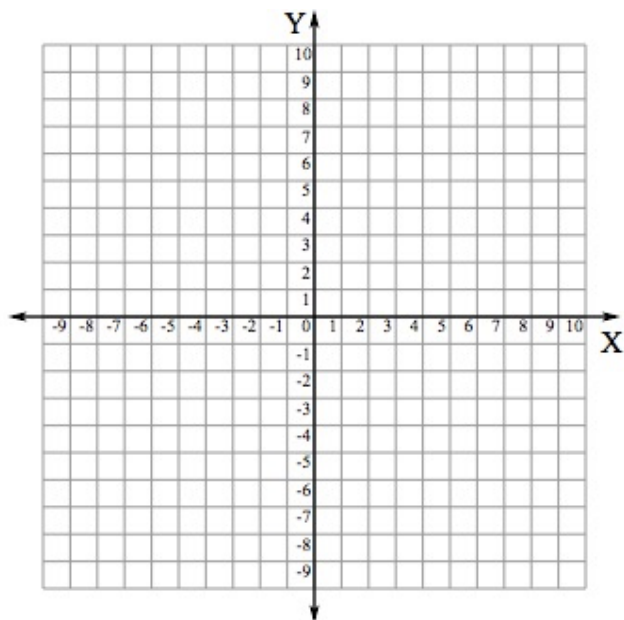
Student Inequality page #2

Yes or no?



Quadratic Eq: _____

Linear Eq: _____



Quadratic Eq: _____

Linear Eq: _____

Graphing Inequalities

9. $y \geq (x + 1)^2 - 4$ $y \geq -(x + 1)^2 + 1$

10. $y < -(x - 1)^2 - 1$ $y > -2(x - 4)^2 + 2$

11. $y \geq \frac{2}{3}x - 6$
 $y \geq 3x + 1$
 $y < -x + 1$

12. $y < -2x^2 + 4x - 5$ $y = -5$

Check if the coordinate is a solution to the region for problems 13 & 14

13. Eq #1: $y \geq -x^2 + 4x - 7$

Eq: #2: $y \geq x - 2$

Coordinate: (0, -3)

14. Eq #1: $y \geq -(x - 1)^2 - 2$

Eq: #2: $y > 2x - 5$

Coordinate: (1, -1)

Station 5: Solving Systems with 3 variables

Challenge:

$$4x + 2y + 3z = 30$$

$$x - 5y + 3z = -30$$

$$-3x - y - 5z = -14$$

-OR-

Basic:

15.

$$-6x + 6y + 4z = -26$$

$$3x + 5y + 4z = -25$$

$$3z = -15$$

16.

$$x - 2y - 5z = -29$$

$$3x + y - 3z = -8$$

$$4x = 12$$

17.

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

$$6x + 3y + 3z = 0$$

$$4y = -8$$

Substitution vs. Elimination

18. $4x - 5y = 18$
 $x + y = -18$

19. $6x - 2y = 22$
 $2x - 4y = -26$

20. $y = x - 7$
 $y = -5x - 1$

21. $y = 3x - 13$
 $y = -4x + 1$

22. $y = x^2 - 3x - 4$ and $y = x - 8$

23. $y = x^2 - x - 6$ and $y = x - 10$