

Due: _____

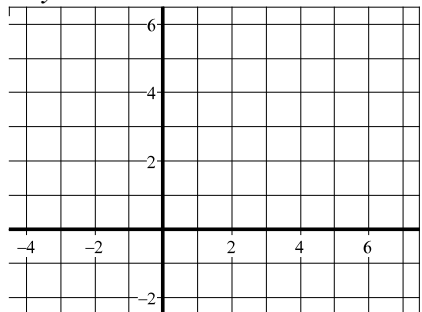
Honors Algebra 2 Chapter 3 Worksheet

Name: _____

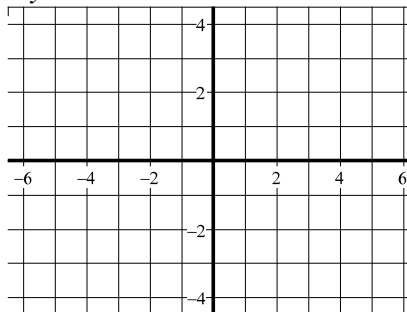
Show work. No Calculator.

Solve each system of equations by graphing:

1. $y = 3x - 2$
 $y = -2x + 3$ Answer: _____



2. $3x - y = 1$
 $2y - 6x = -2$ Answer: _____



Refer to equations 1 and 2. State whether the system is “Consistent and Dependent”, “Consistent and Independent”, or “Inconsistent.”

3. Exercise 1 Answer: _____ 4. Exercise 2 Answer: _____

Solve each system by substitution, work must be shown.

5. $x - 3y = 4$
 $3x + 2y = 1$ Answer: _____

6. $4x - 3y = -23$
 $x + 7y = 2$ Answer: _____

Solve each system by elimination, work must be shown.

7. $3x - y = 10$
 $4x - y = 16$ Answer: _____

8. $5x + 4y = 10$
 $3x + 5y = -7$ Answer: _____

Solve, work must be shown.

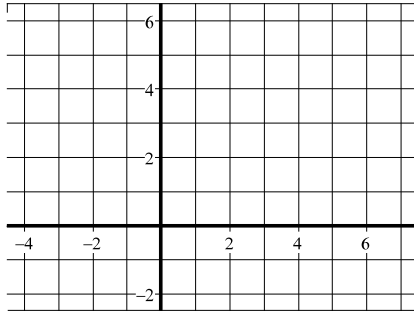
$$x + 2y - z = -7$$

9. $2x - 2y - z = 6$ Answer: _____

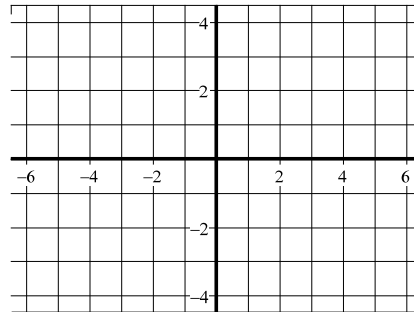
$$x + y - 2z = -6$$

Solve each system by graphing.

10. $y \leq 3x - 2$
 $y \leq -2x + 3$



11. $4x - 3y \leq -12$
 $2x + 3y \leq 6$



Solve the Linear Programming Problems – Will work on together in class.

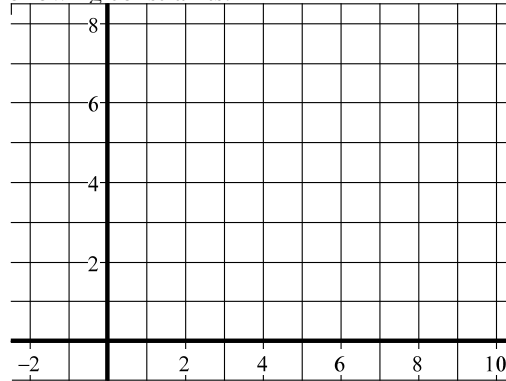
12-13. Mr. Duffy determines that profit for his company is determined by $P(x, y) = 180x + 275y$. Find the maximum profit under the following constraints.

$$y \leq \frac{1}{2}x + 2$$

$$y \leq -\frac{3}{4}x + 7$$

$$x \geq 0$$

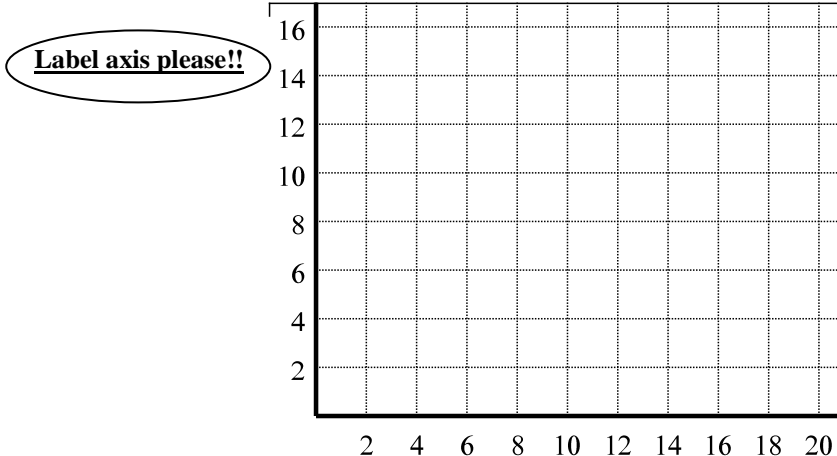
$$y \geq 0$$



Answer: _____

14-17 A clothing company makes jackets and pants. Each requires two operations, A and B. Operation A is limited to 20 hours per day. Operation B is limited to 32 hours per day. For a jacket to be made it takes 1 hour in operation A and 4 hours in operation B. Whereas pants take 2 hours in operations A and 2 hours in operation B. If the jackets have a profit of \$14 and pants have a profit of \$10, how many jackets and pants should be made to maximize the profits?

Graph of constraints:



Constraints:

Profit Function:

Answer:
