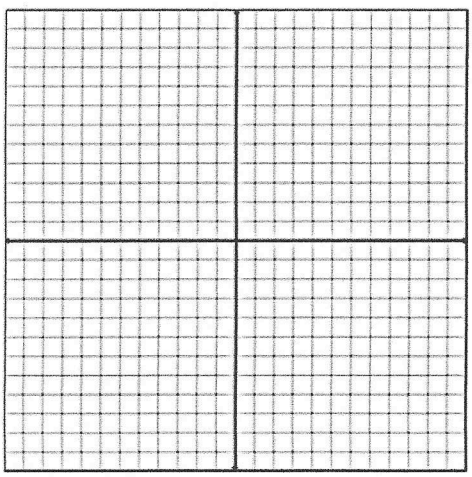
Notes 6.4 Graphing Systems of inequalities

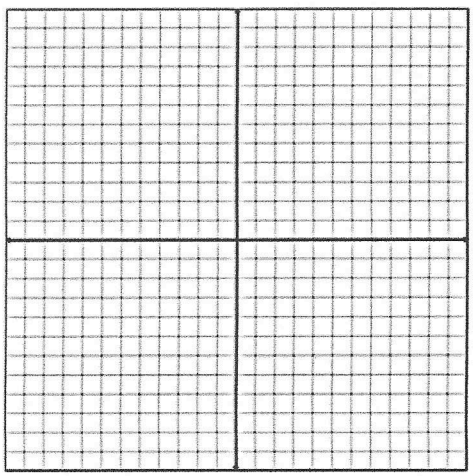
- **Find the solution to a system of inequalities by graphing**
- **Identify the vertices of the solution set.**
- **Identify if the solution is bounded or unbounded**

1-14 Graph the Inequality:

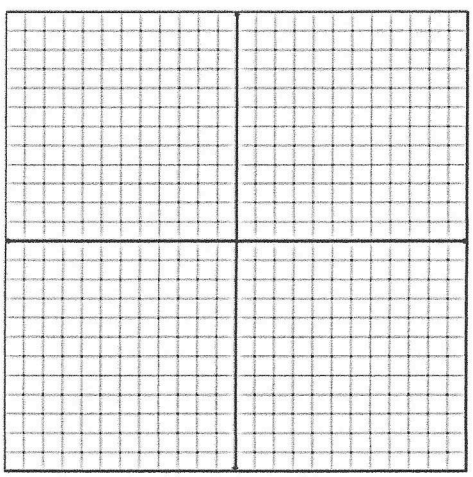
8. $3x + 4y + 12 > 0$



10. $-x^2 + y \geq 10$

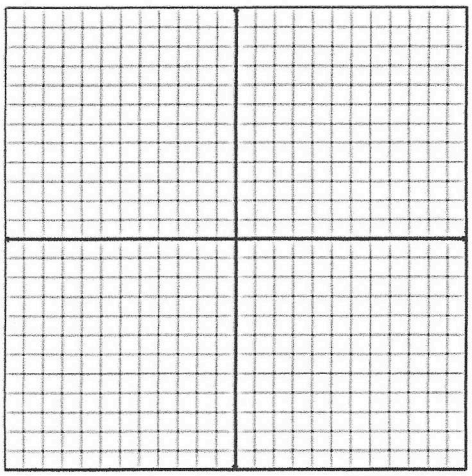


12. $x^2 + y^2 \geq 9$

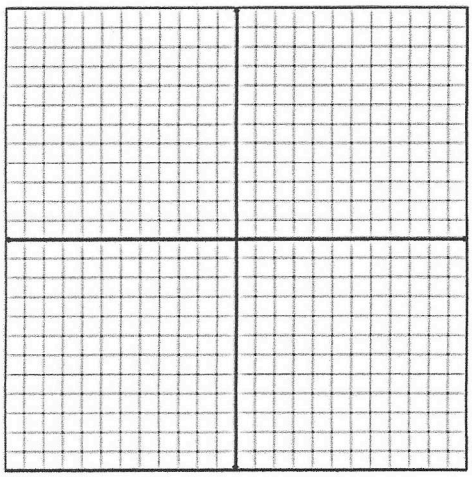


Graph the solution of the system of inequalities. Find the coordinates of all vertices, and determine whether the solution set is bounded.

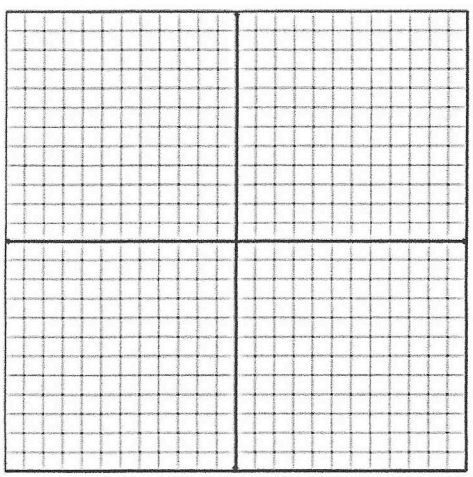
22. $\begin{cases} x - y > 0 \\ 4 + y \leq 2x \end{cases}$



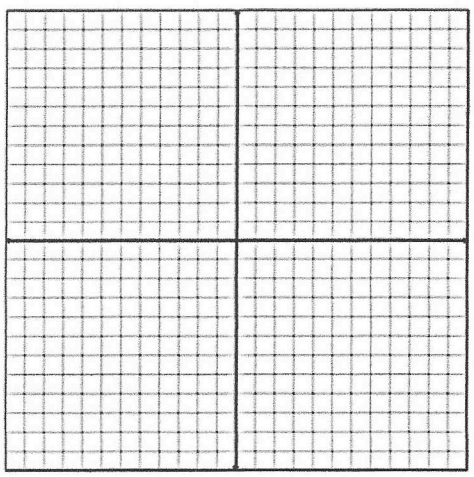
24. $\begin{cases} x > 2 \\ y < 12 \\ 2x - 4y > 8 \end{cases}$



25. $\begin{cases} y < 9 - x^2 \\ y \geq x + 3 \end{cases}$



32. $\begin{cases} y < x + 6 \\ 3x + 2y \geq 12 \\ x - 2y \leq 2 \end{cases}$



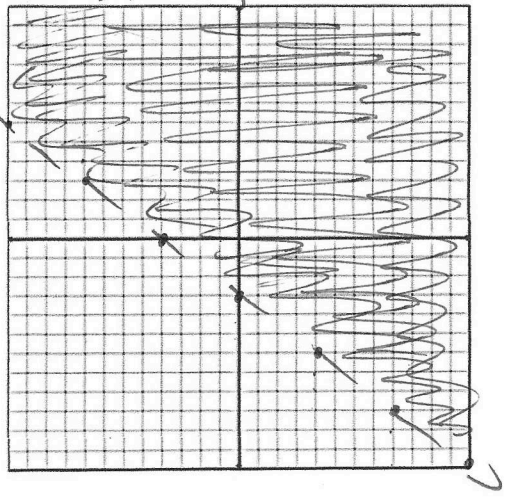
Notes 6.4 Graphing Systems of inequalities

- **Find the solution to a system of inequalities by graphing**
- **Identify the vertices of the solution set.**
- **Identify if the solution is bounded or unbounded**

1-14 Graph the Inequality:

8. $3x + 4y + 12 > 0$

$3x + 4y > -12$

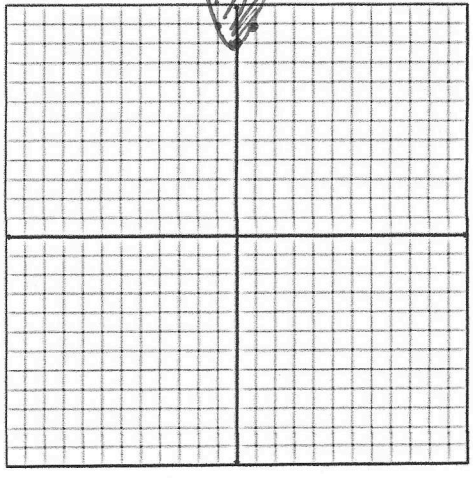


x-int: $(-4, 0)$

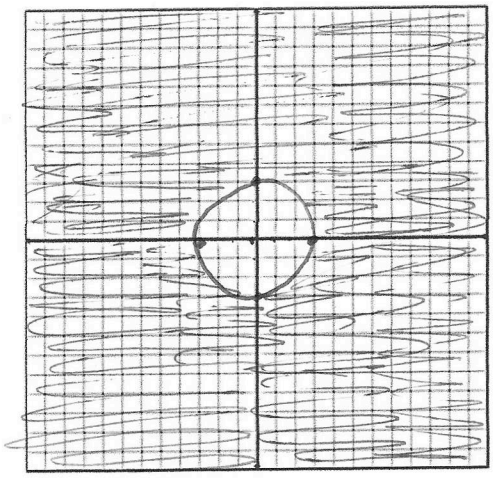
y-int $(0, -3)$

10. $-x^2 + y \geq 10$

$y \geq x^2 + 10$



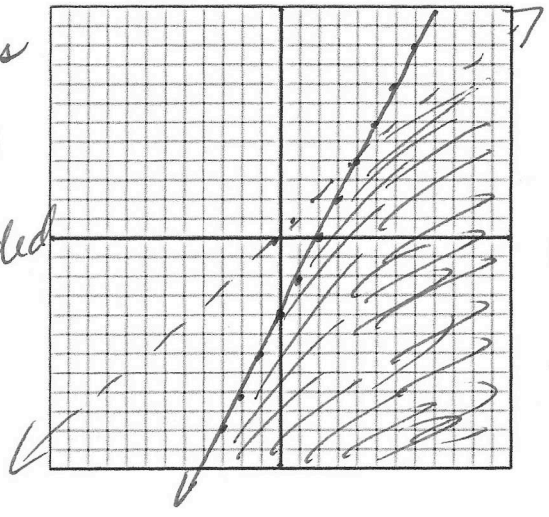
12. $x^2 + y^2 \geq 9$



Graph the solution of the system of inequalities. Find the coordinates of all vertices, and determine whether the solution set is bounded.

22. $\begin{cases} x - y > 0 \\ 4 + y \leq 2x \end{cases}$

$y \leq 2x - 4$

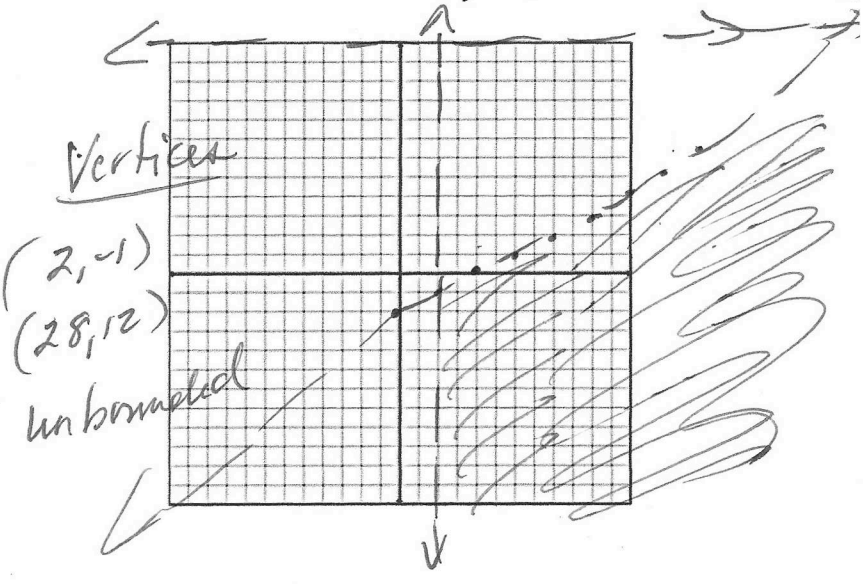


Vertices

(4,4)

unbounded

24. $\begin{cases} x > 2 \\ y < 12 \\ 2x - 4y > 8 \end{cases}$



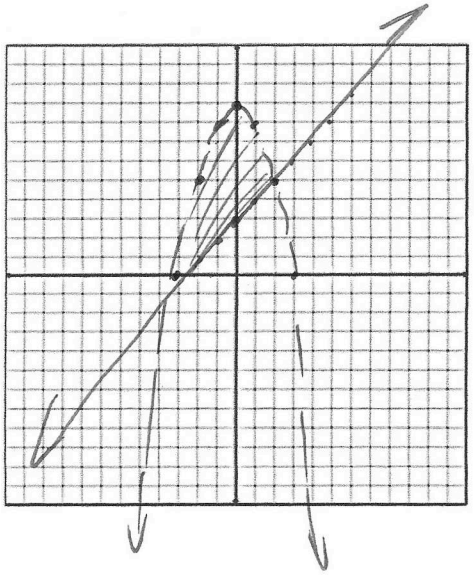
Vertices

(2,-1)

(28,12)

unbounded

25. $\begin{cases} y < 9 - x^2 \\ 3x + 2y \geq 12 \\ y \geq x + 3 \end{cases}$



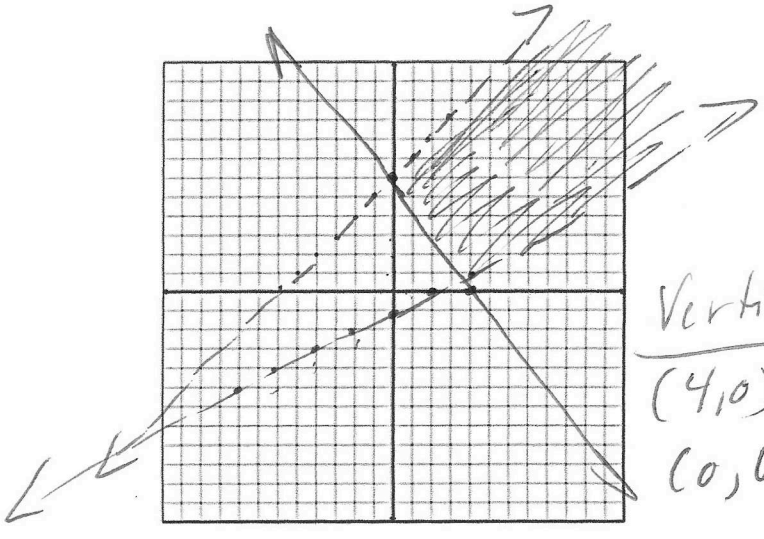
Vertices

(-3,0)

(2,5)

Bound

32. $\begin{cases} y < x + 6 \\ 3x + 2y \geq 12 \\ x - 2y \leq 2 \end{cases}$



Vertices

(4,0)

(0,6)

unbounded