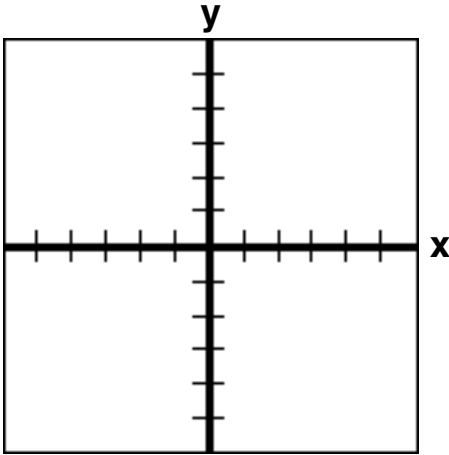


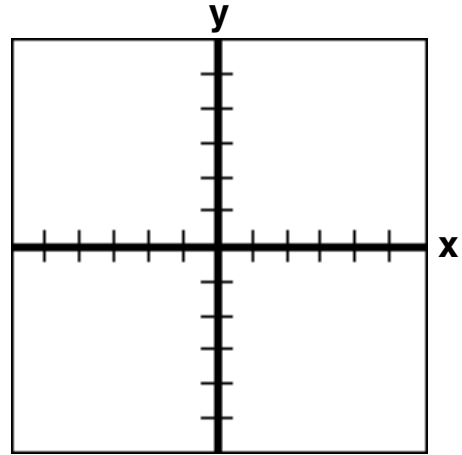
Chapter 10 – 11 Review

Graph Each Relation.

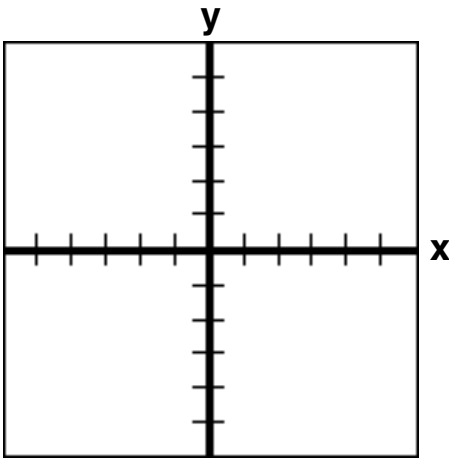
1. $y = (x+1)^2 - 3$



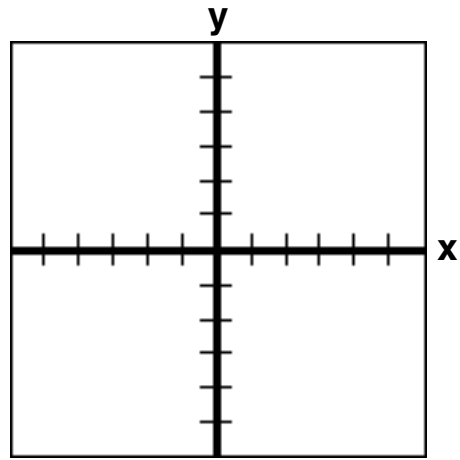
2. $x = (y-2)^2$



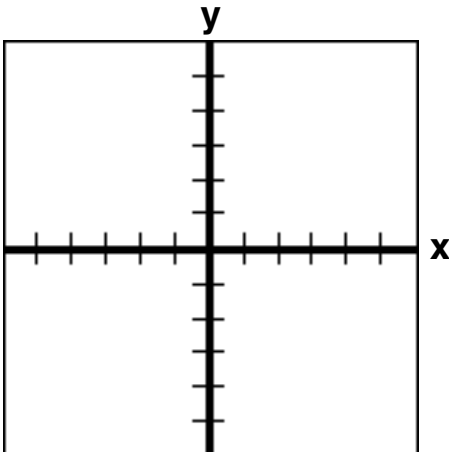
3. $x = y^2 - 3$



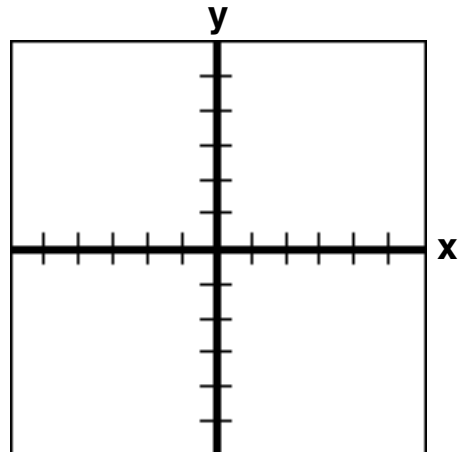
4. $y = \sqrt{-x}$



5. $x = -\sqrt{y}$



6. $x = \sqrt{y-2}$



7. Find the distance between the two given points.

$$(-5, 5) \text{ and } (-1, 9)$$

8. State the center and radius given the equation for a circle in standard form.

$$(x-1)^2 + (y+5)^2 = \frac{16}{49}$$

center point _____ radius _____

Write **the equation for the circle** given the center and radius.

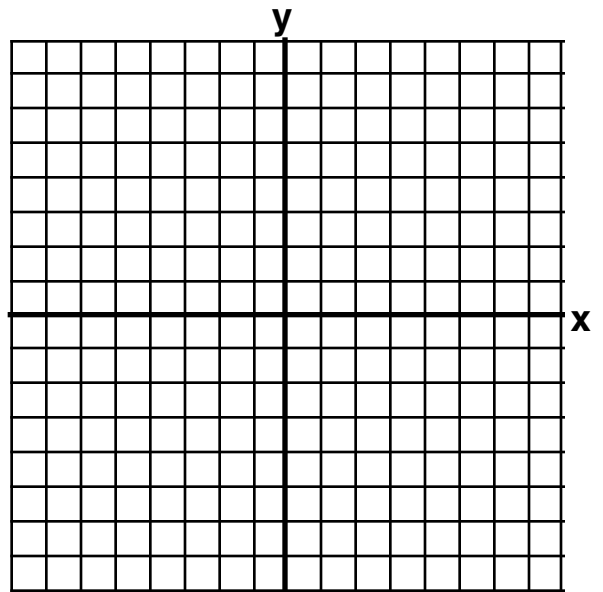
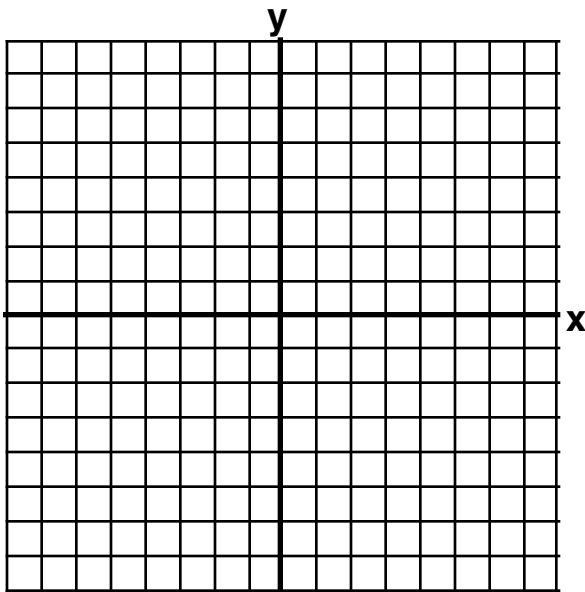
9. Center is at $(-3, 0)$ and $r = 3\sqrt{2}$

10. Center is at $(4, -9)$ and $r = \frac{5}{2}$

Graph each relation.

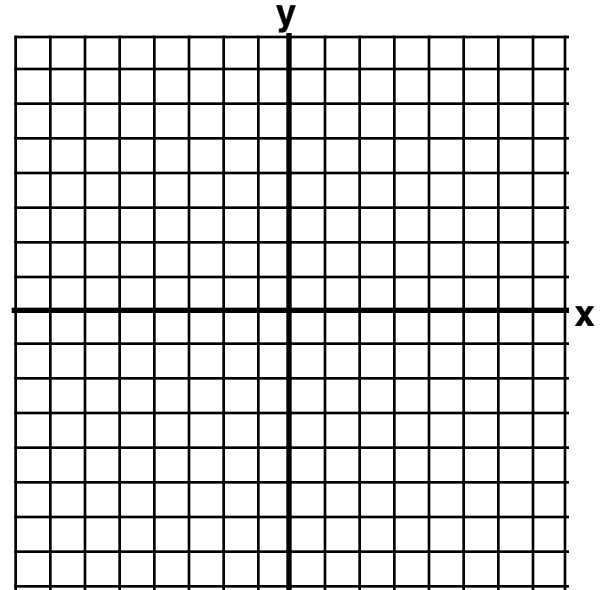
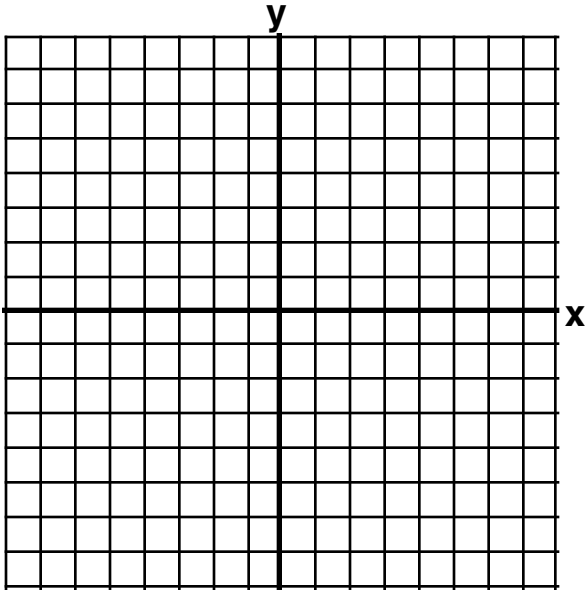
11. $x^2 + (y+3)^2 = 25$

12. $(x+1)^2 + (y-2)^2 = 36$



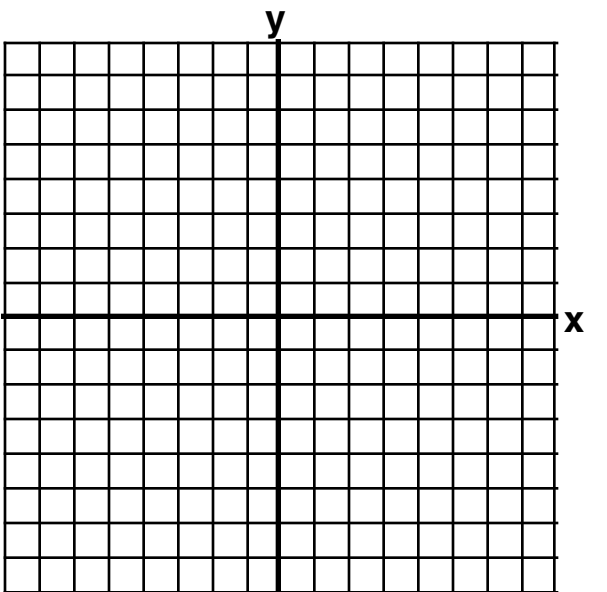
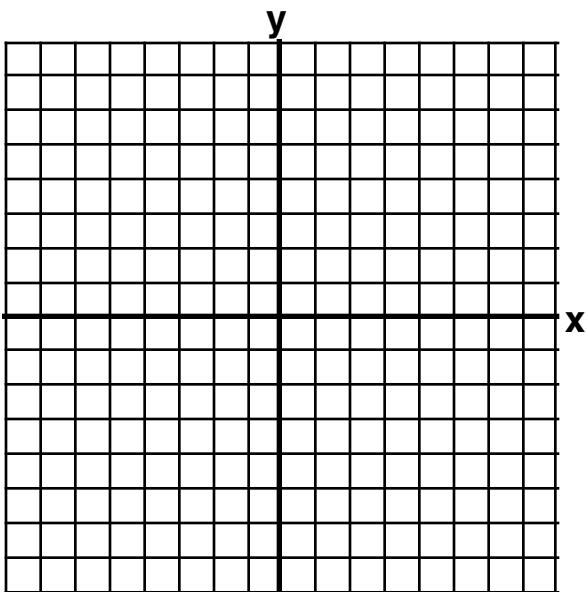
13. $9(x+1)^2 + 16y^2 = 144$

14. $4(x-3)^2 + 25(y+2)^2 = 100$



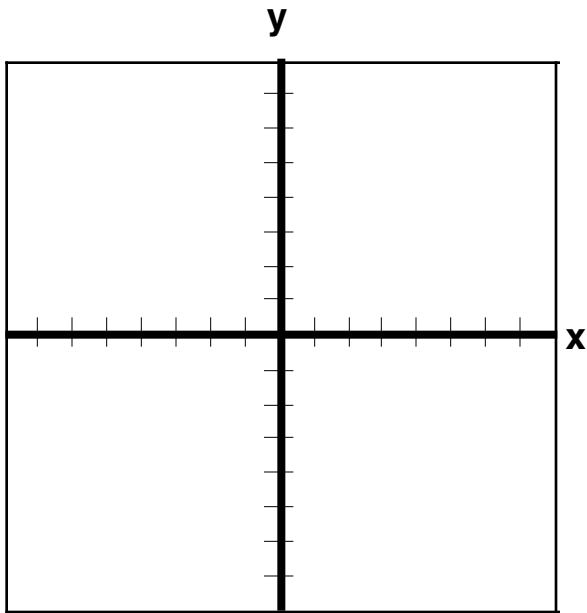
15. $\frac{(x+2)^2}{4} - \frac{y^2}{16} = 1$

16. $\frac{(y+1)^2}{25} - \frac{x^2}{4} = 1$

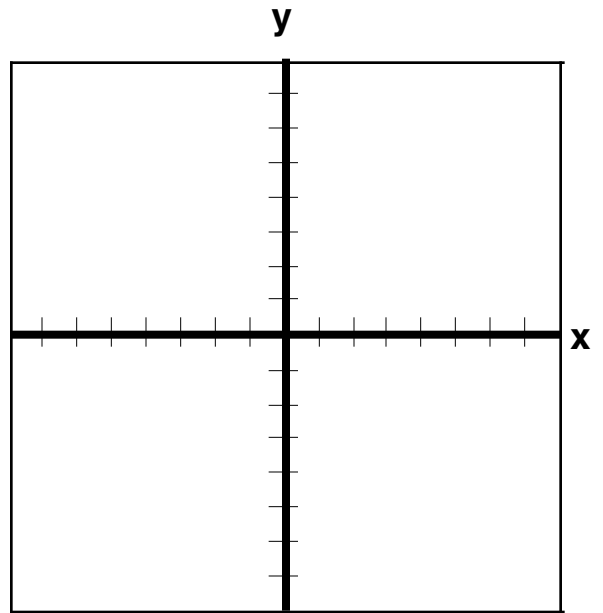


Graph each inequality

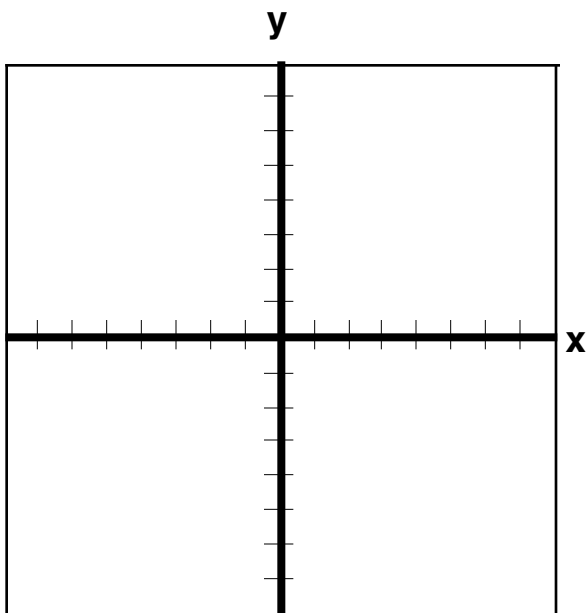
17. $y \leq -x^2 + 1$



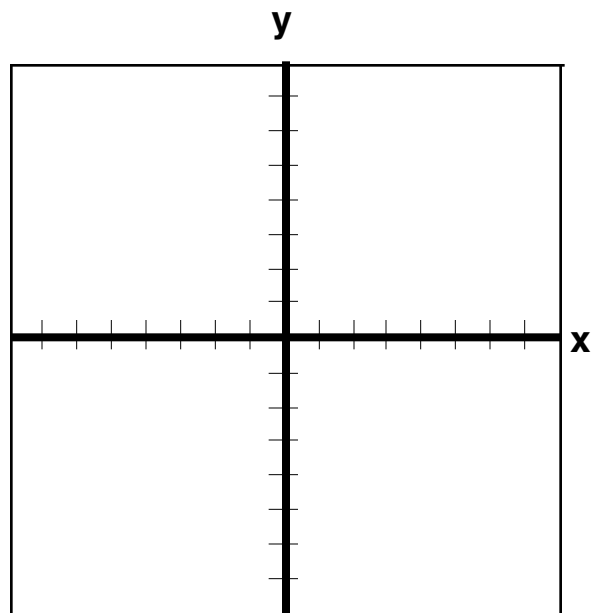
18. $x^2 + y^2 \geq 25$



19. $\frac{x^2}{4} + \frac{y^2}{36} \leq 1$



20. $\frac{y^2}{49} - \frac{x^2}{16} \geq 1$

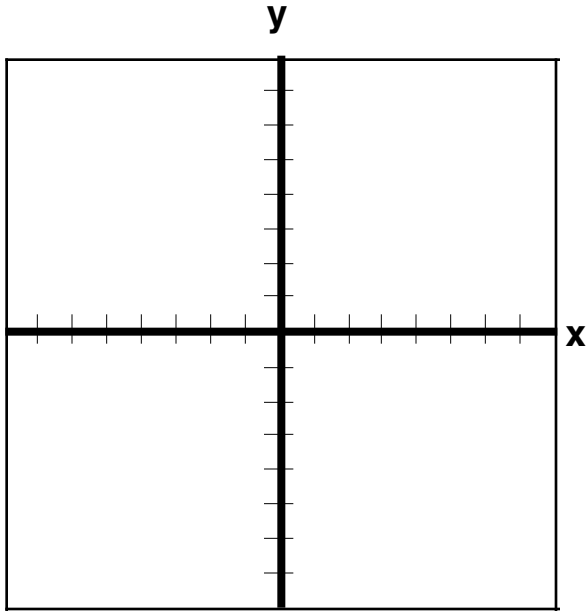


Graph the solution to each **system of nonlinear inequalities**.

$$x^2 + y^2 \geq 16$$

21.

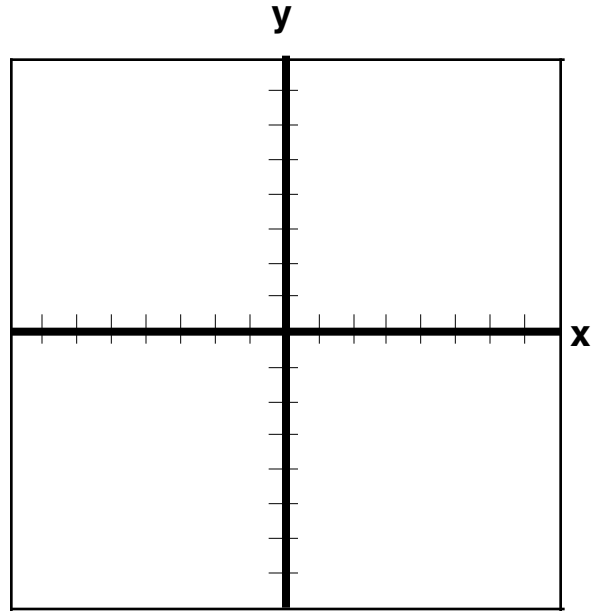
$$y \geq x^2 + 2$$



$$\frac{x^2}{16} + \frac{y^2}{49} \geq 1$$

22.

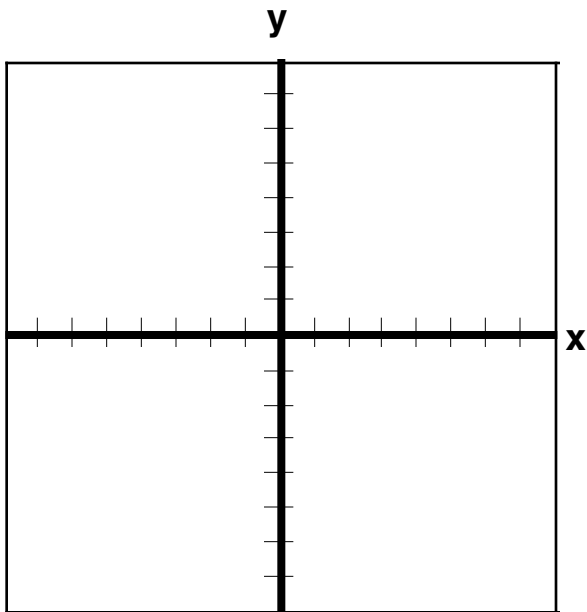
$$y \leq \frac{-5}{3}x + 4$$



$$\frac{y^2}{16} - \frac{x^2}{4} \leq 1$$

23.

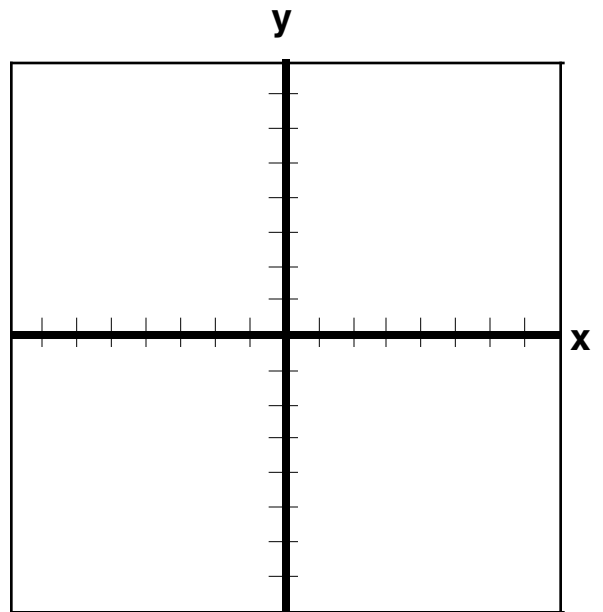
$$x^2 + y^2 \geq 49$$



$$\frac{x^2}{36} - \frac{y^2}{25} \leq 1$$

24.

$$\frac{x^2}{9} + \frac{y^2}{16} \geq 1$$



Solve each nonlinear system for the set of real numbers.

25. $y^2 = -x$
 $y = x + 2$

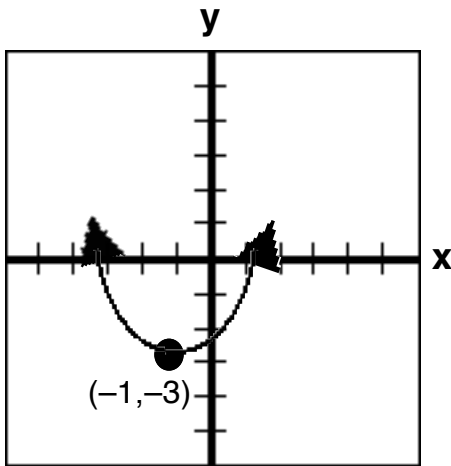
26. $x^2 + y^2 = 12$
 $y = \sqrt{x}$

27. $x + y = 11$
 $xy = 30$

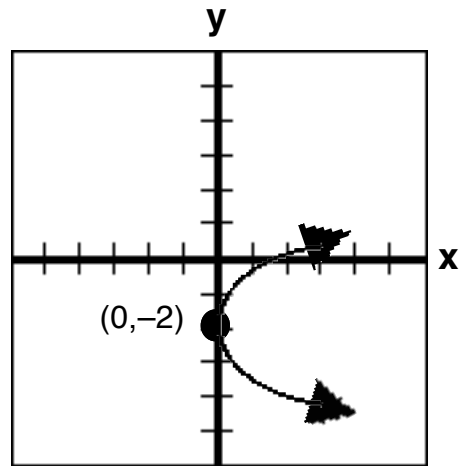
28. $2x^2 + y^2 = 6$
 $x^2 - 2y^2 = 8$

Chapter 10 Review Answers

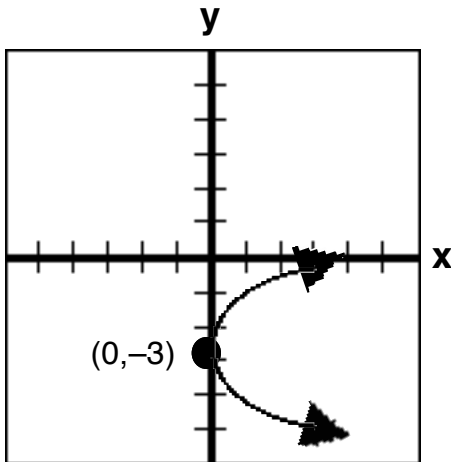
1. $y = (x+1)^2 - 3$



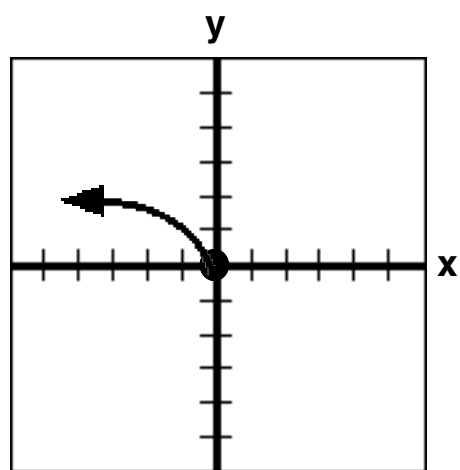
2. $x = (y-2)^2$



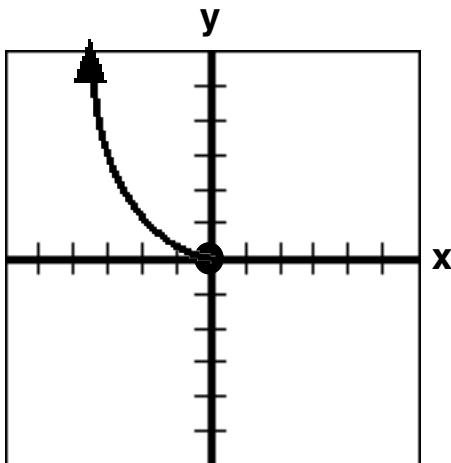
3. $x = y^2 - 3$



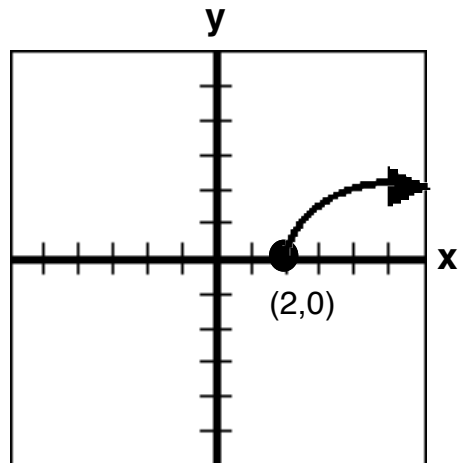
4. $y = \sqrt{-x}$



5. $x = -\sqrt{y}$



6. $x = \sqrt{y-2}$



7. $d = 4\sqrt{2}$

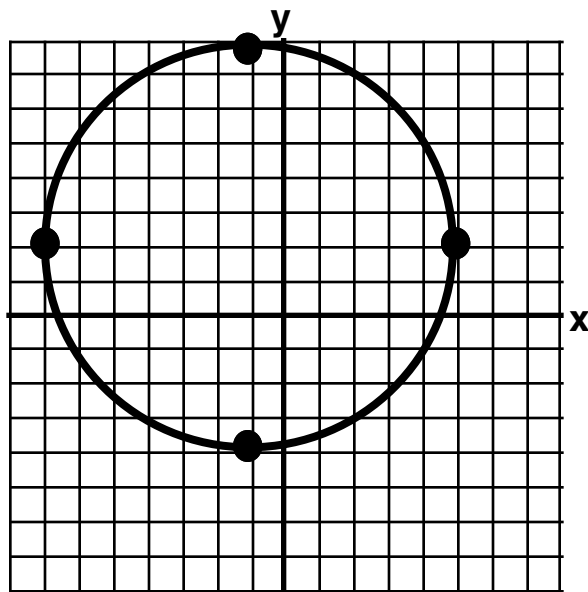
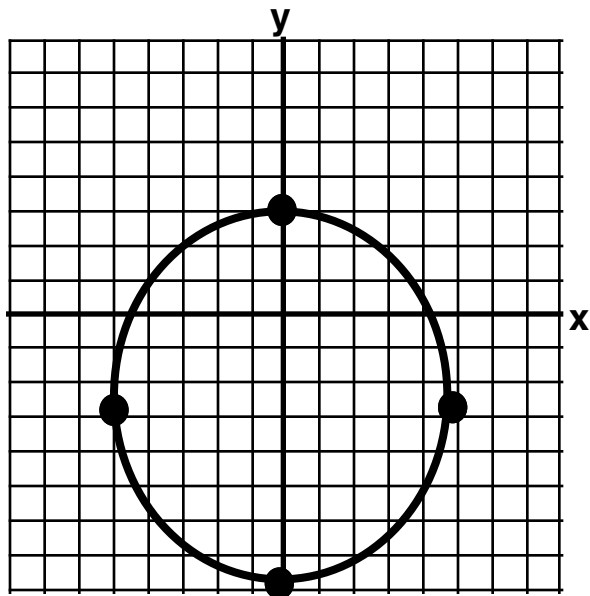
8. center point $(-5, 3)$ $r = 6$

9. $(x + 3)^2 + y^2 = 18$

10. $(x - 4)^2 + (y + 9)^2 = \frac{25}{4}$

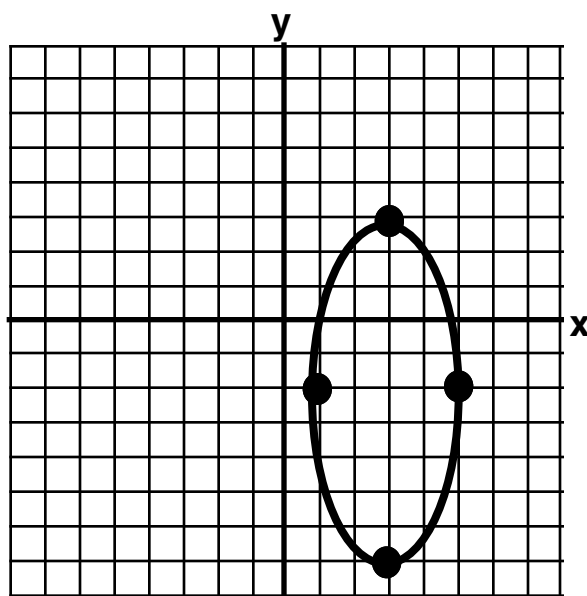
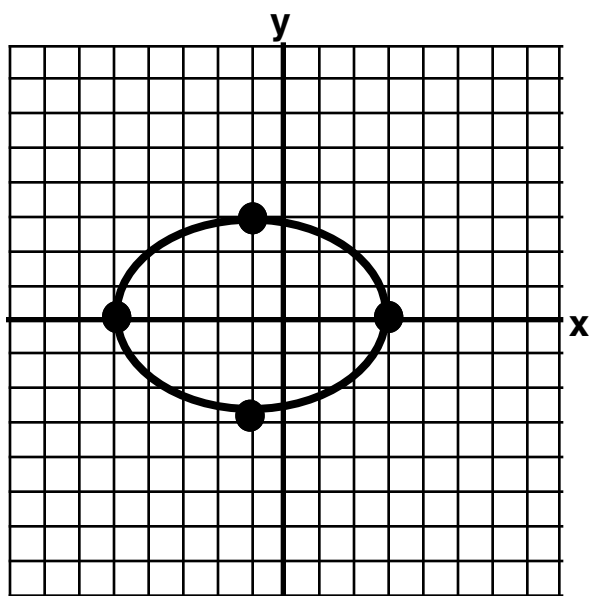
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12. $(x + 1)^2 + (y - 2)^2 = 36$

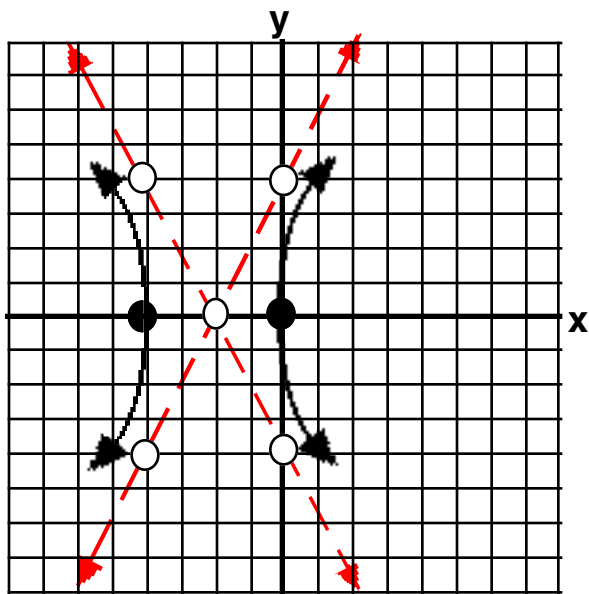


13. $9(x + 1)^2 + 16y^2 = 144$

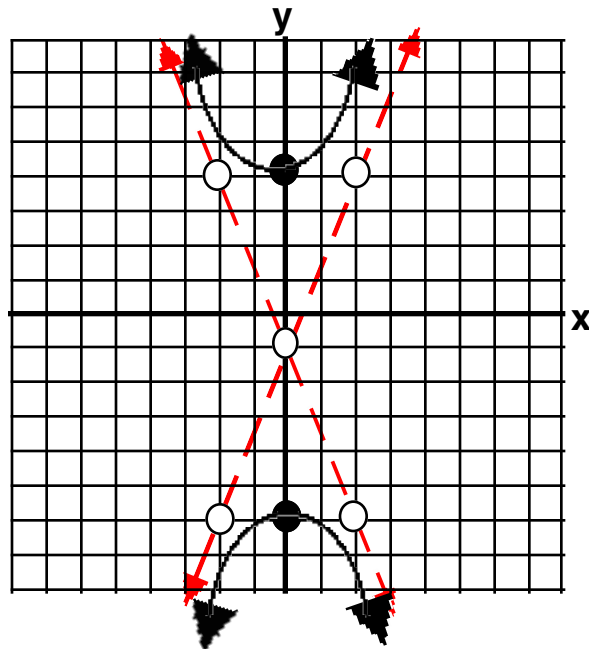
14. $25(x - 3)^2 + 4(y + 2)^2 = 100$



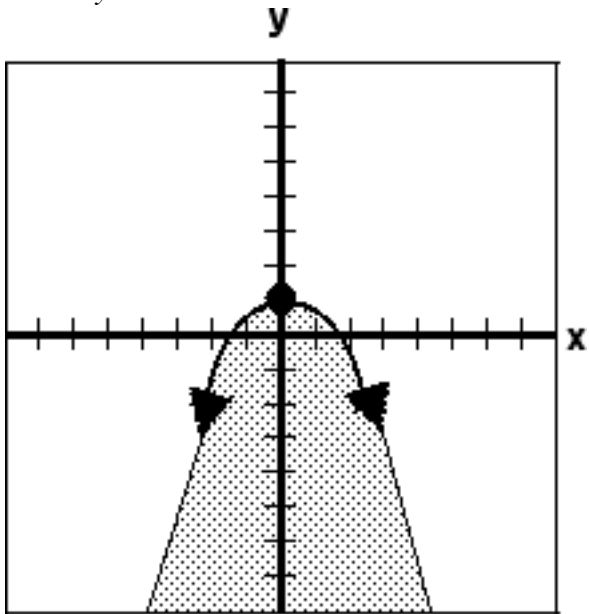
15. $\frac{(x+2)^2}{4} - \frac{y^2}{16} = 1$



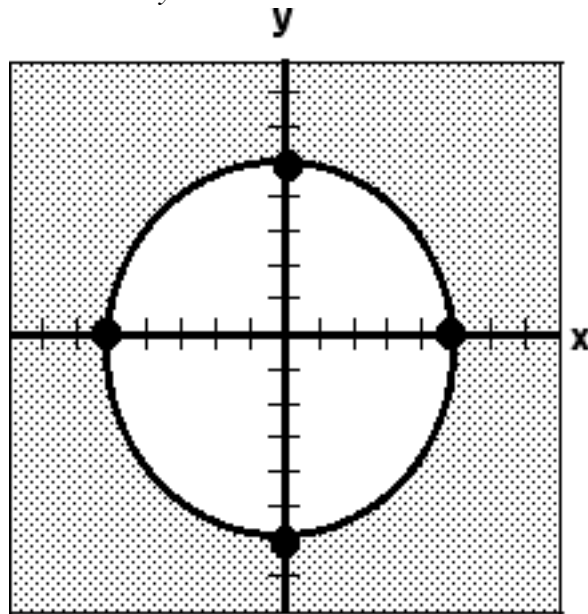
16. $\frac{(y+1)^2}{25} - \frac{x^2}{4} = 1$



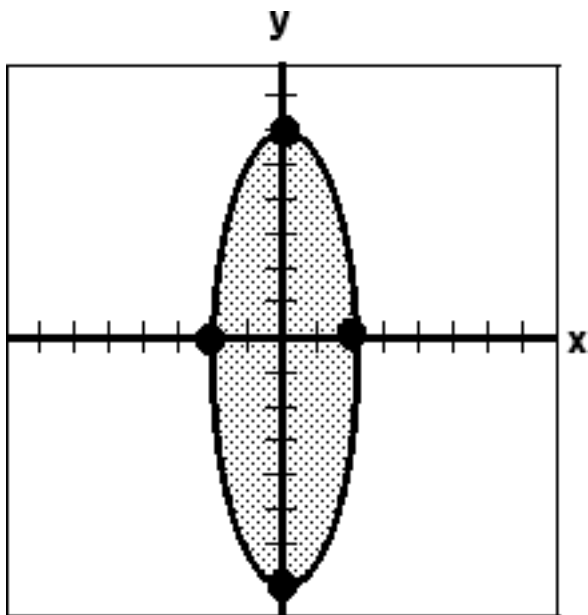
17. $y \leq -x^2 + 1$



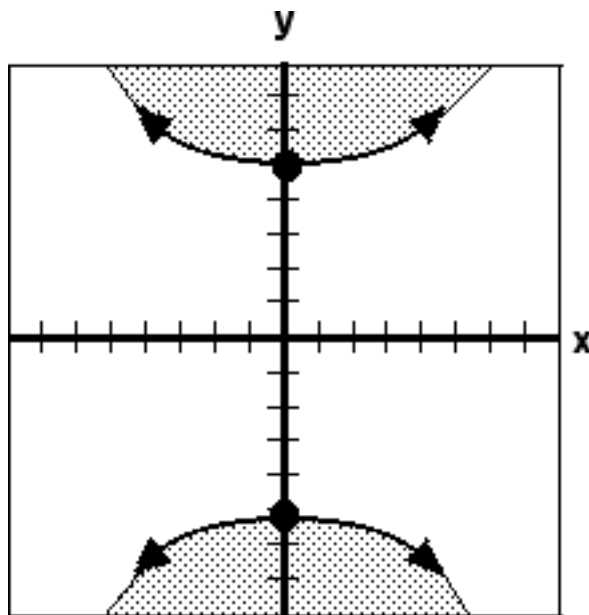
18. $x^2 + y^2 \geq 25$



19. $\frac{x^2}{4} + \frac{y^2}{36} \leq 1$



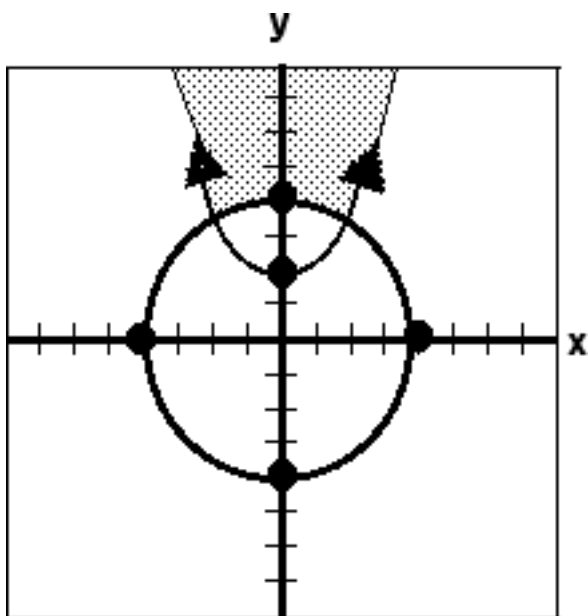
20. $\frac{y^2}{49} - \frac{x^2}{16} \geq 1$



Graph the solution to each **system of nonlinear inequalities**.

$x^2 + y^2 \geq 16$

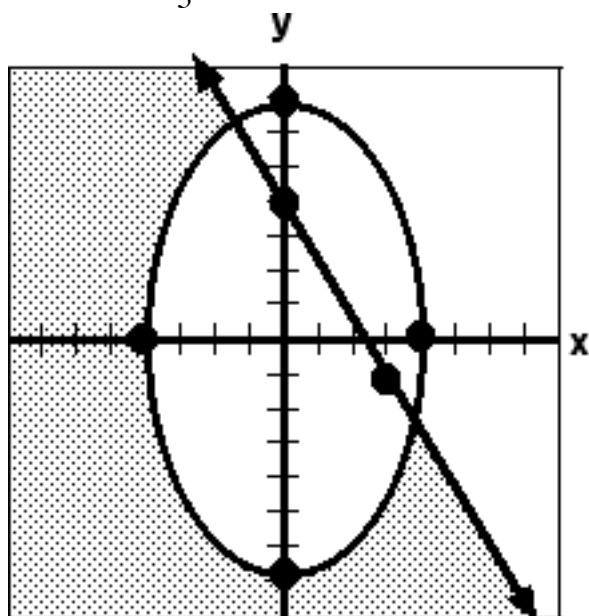
21. $y \geq x^2 + 2$



$\frac{x^2}{16} + \frac{y^2}{49} \geq 1$

22.

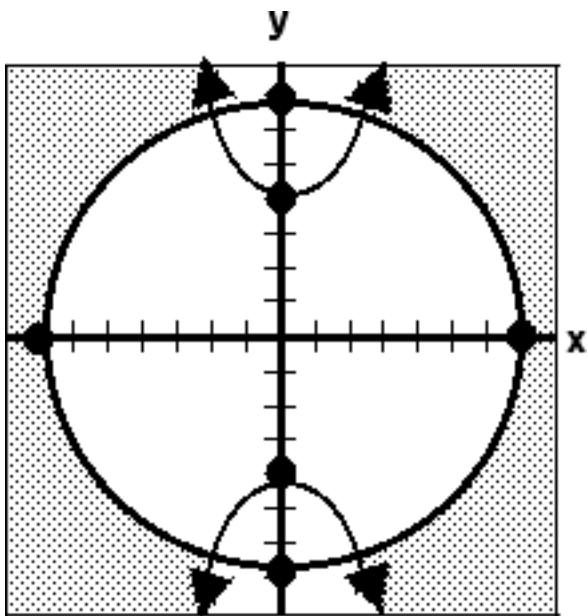
$y \leq \frac{-5}{3}x + 4$



$$\frac{y^2}{16} - \frac{x^2}{4} \leq 1$$

23.

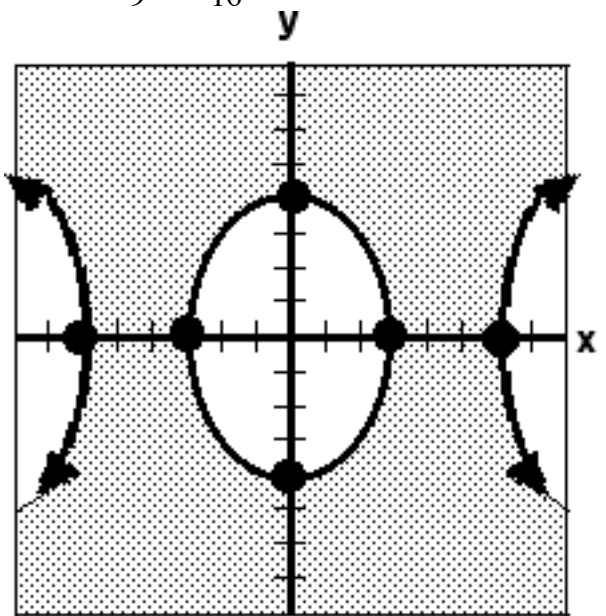
$$x^2 + y^2 \geq 49$$



$$\frac{x^2}{36} - \frac{y^2}{25} \leq 1$$

24.

$$\frac{x^2}{9} + \frac{y^2}{16} \geq 1$$



Solve each nonlinear system for the set of real numbers.

25. $(-4, -2)$ and $(-1, 1)$

26. $(3, \sqrt{3})$

27. $(5, 6)$ $(6, 5)$

28. No. Sol.