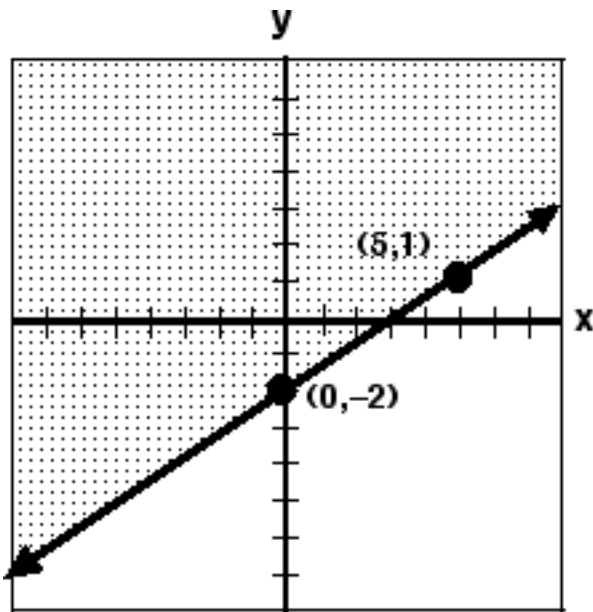


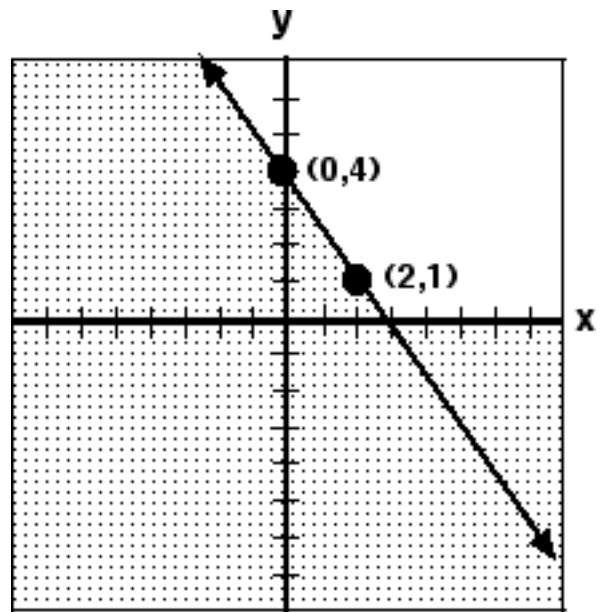
Chapter 11 Systems Answers

Section 11-7 Answers

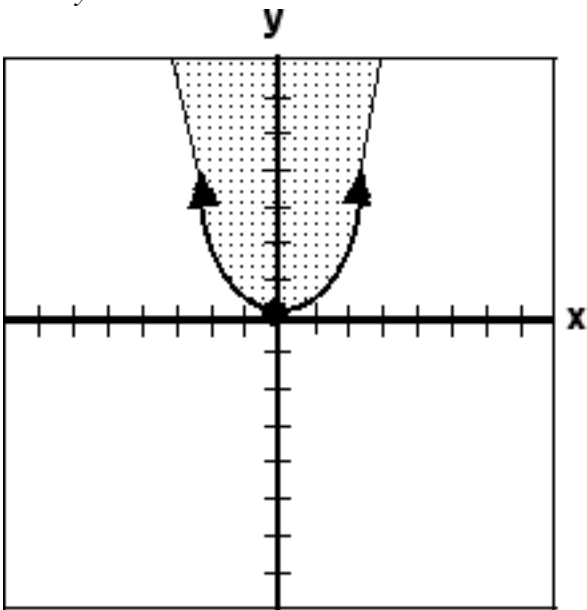
1. $y \geq \frac{3}{5}x - 2$



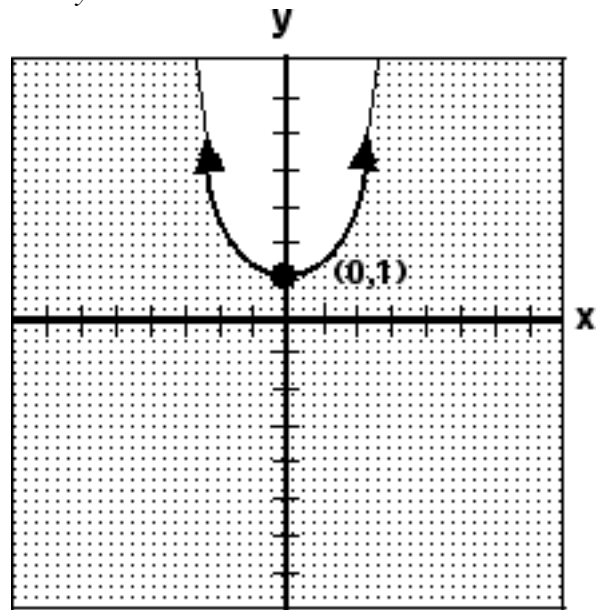
2. $y \leq \frac{-3}{2}x + 4$



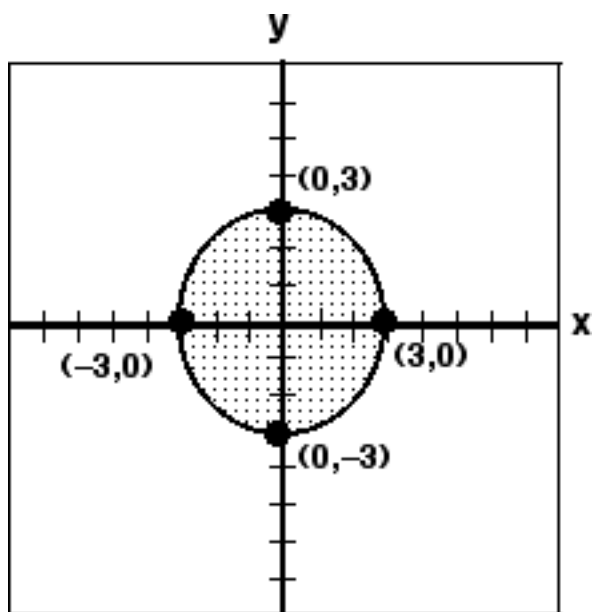
3. $y \geq x^2$



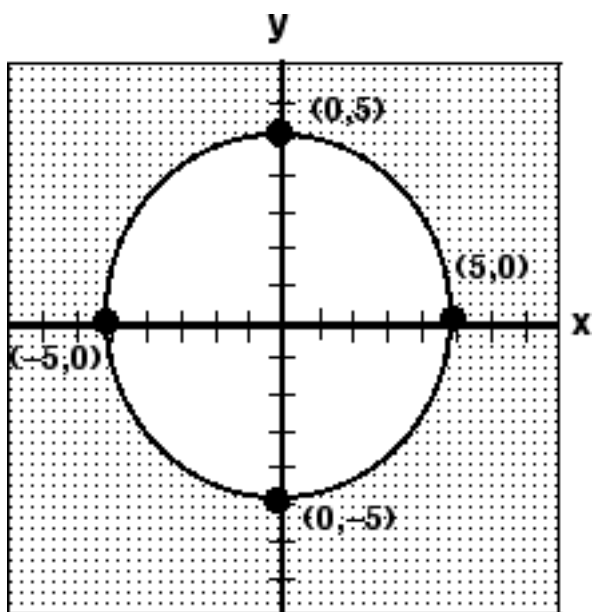
4. $y \leq x^2 + 1$



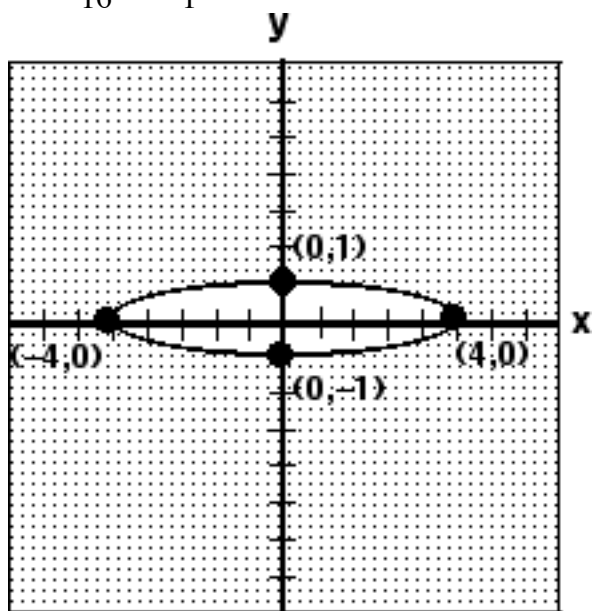
5. $x^2 + y^2 \leq 9$



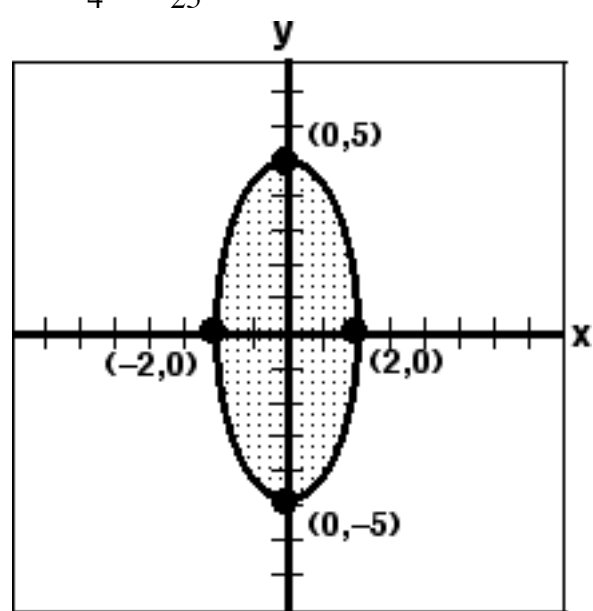
6. $x^2 + y^2 \geq 25$



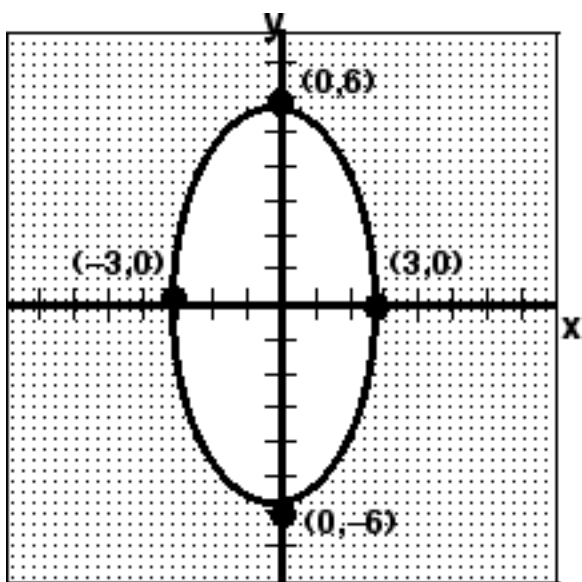
7. $\frac{x^2}{16} + \frac{y^2}{1} \geq 1$



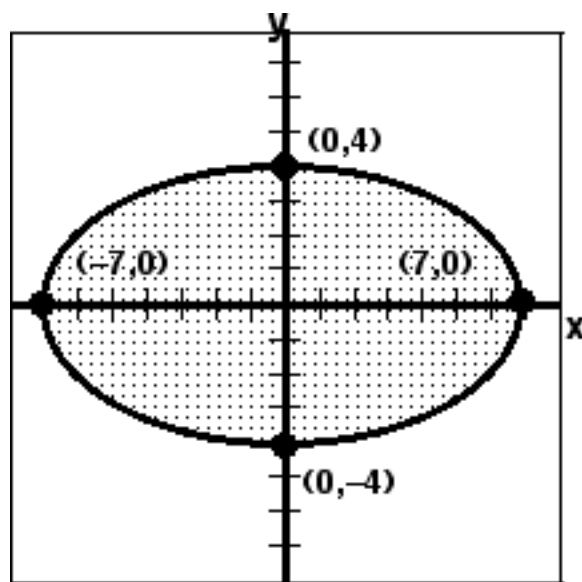
8. $\frac{x^2}{4} + \frac{y^2}{25} \leq 1$



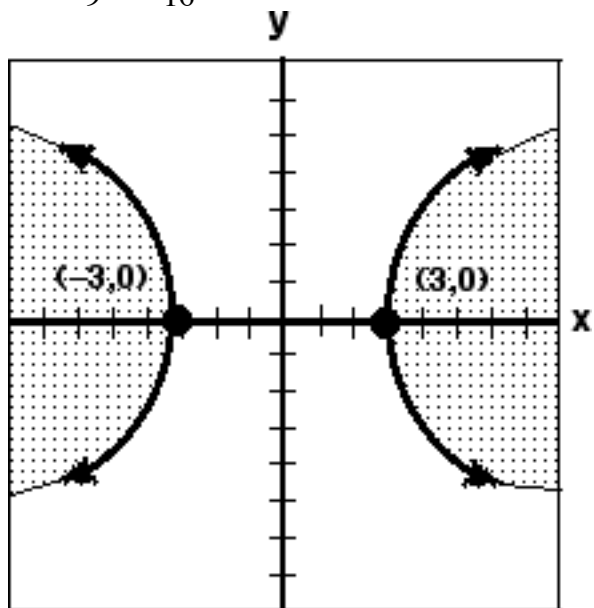
9. $\frac{x^2}{9} + \frac{y^2}{36} \geq 1$



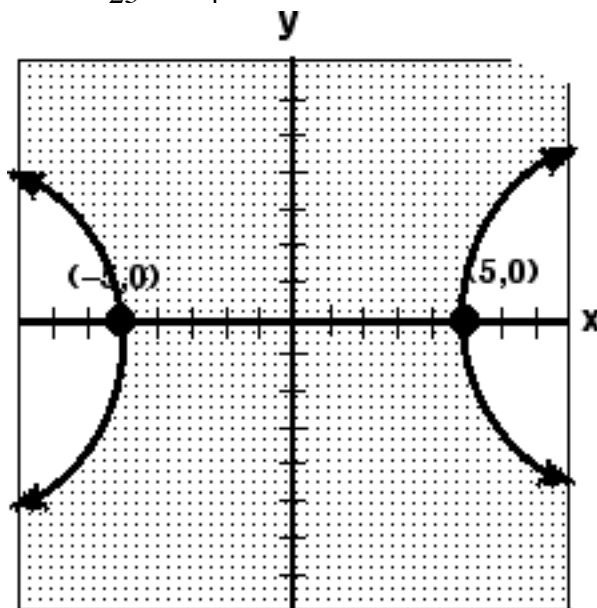
10. $\frac{x^2}{49} + \frac{y^2}{16} \leq 1$



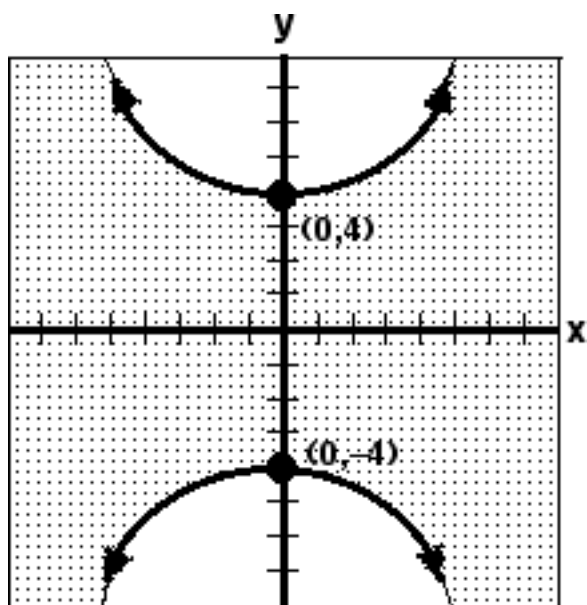
11. $\frac{x^2}{9} - \frac{y^2}{16} \geq 1$



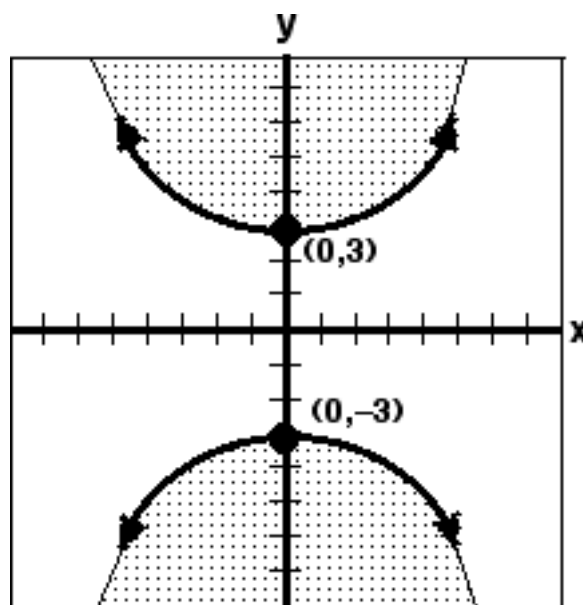
12. $\frac{x^2}{25} - \frac{y^2}{4} \leq 1$



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

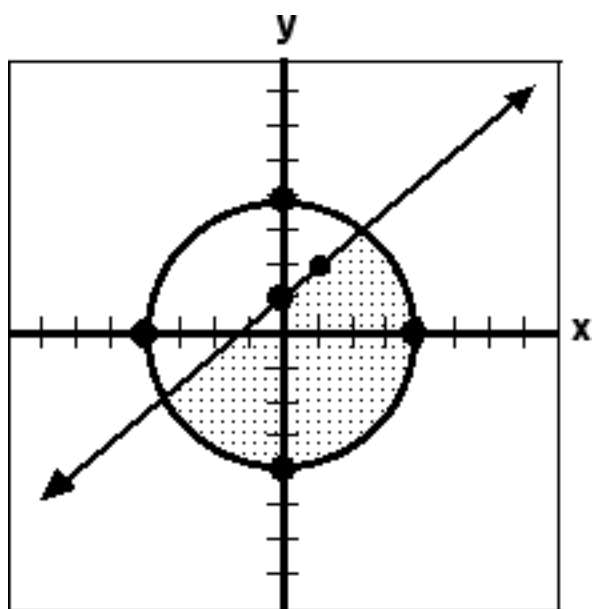


14. $\frac{y^2}{9} - \frac{x^2}{25} \geq 1$

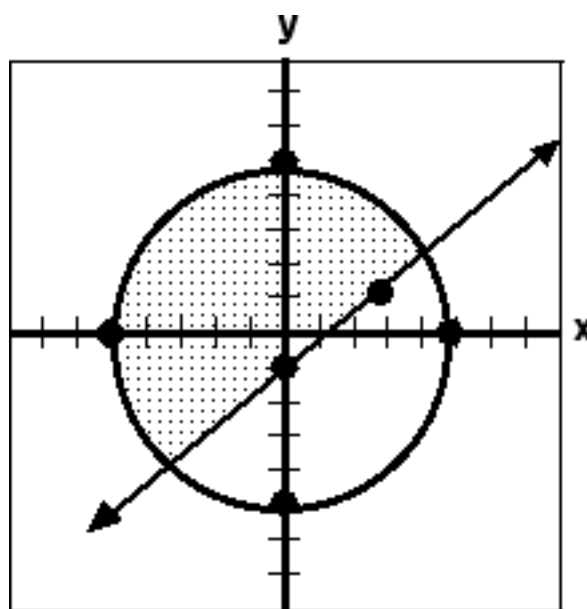


Graph the solution to each system of nonlinear inequalities.

15. $x^2 + y^2 \leq 16$
 $y \leq x + 1$



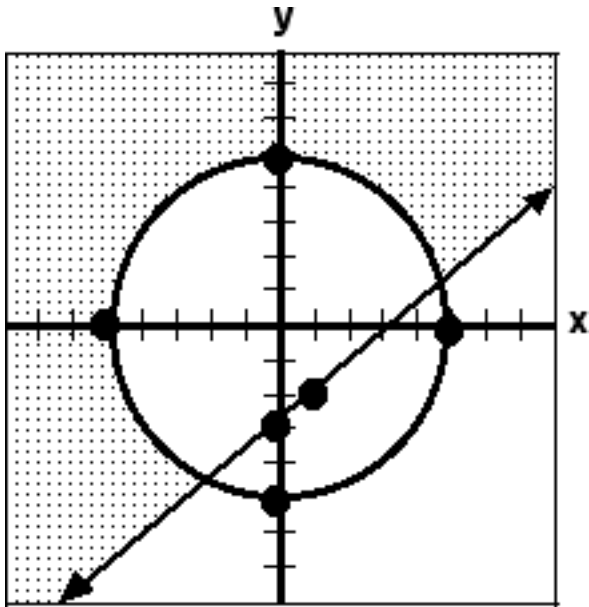
16. $x^2 + y^2 \leq 25$
 $y \geq \frac{2}{3}x - 1$



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

17.

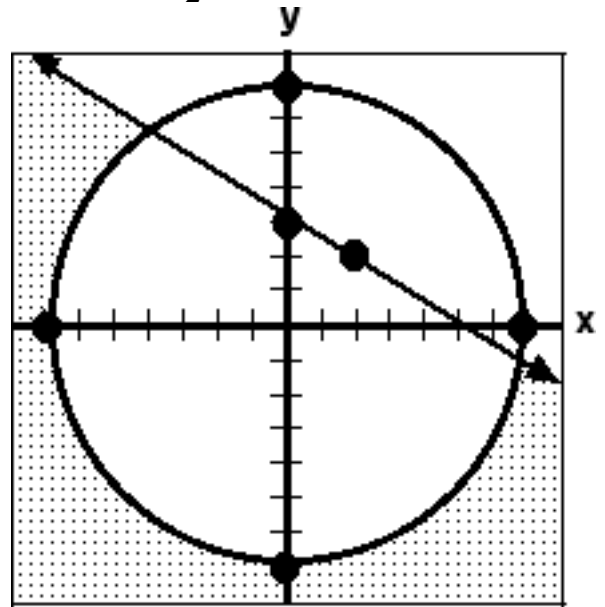
$$y \geq x - 3$$



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

18.

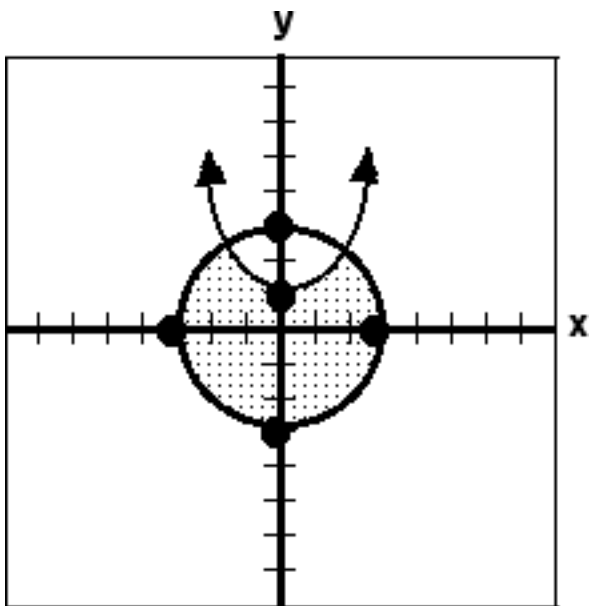
$$y \leq \frac{-1}{2}x + 3$$



$$x^2 + y^2 \leq 9$$

19.

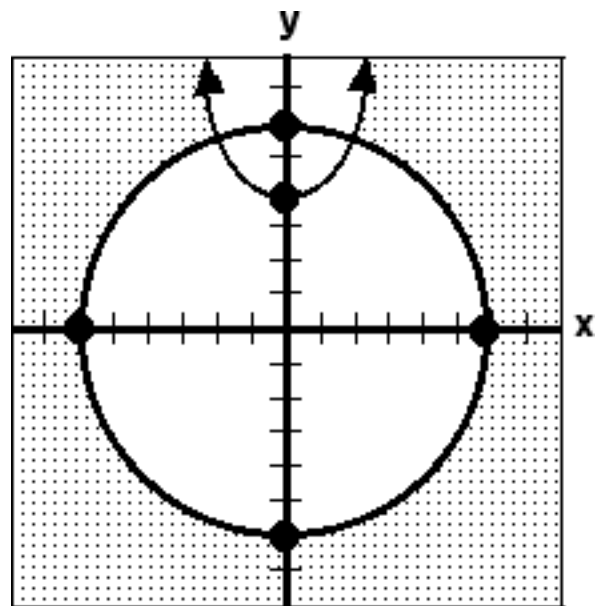
$$y \leq x^2 + 1$$



$$x^2 + y^2 \geq 36$$

20.

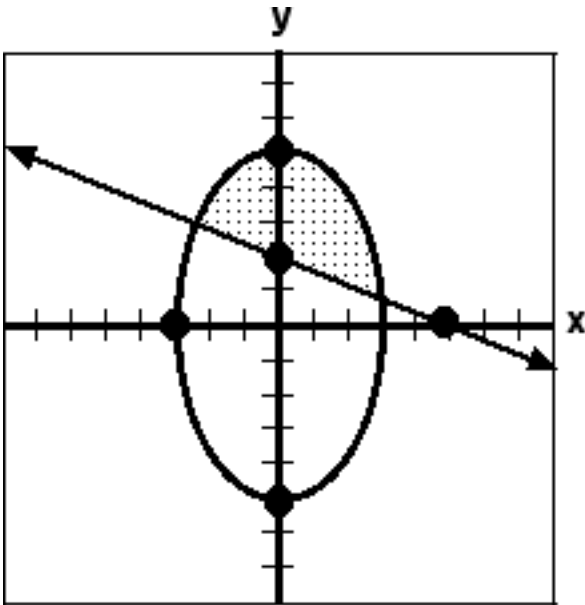
$$y \leq x^2 + 4$$



$$\frac{x^2}{9} + \frac{y^2}{25} \leq 1$$

21.

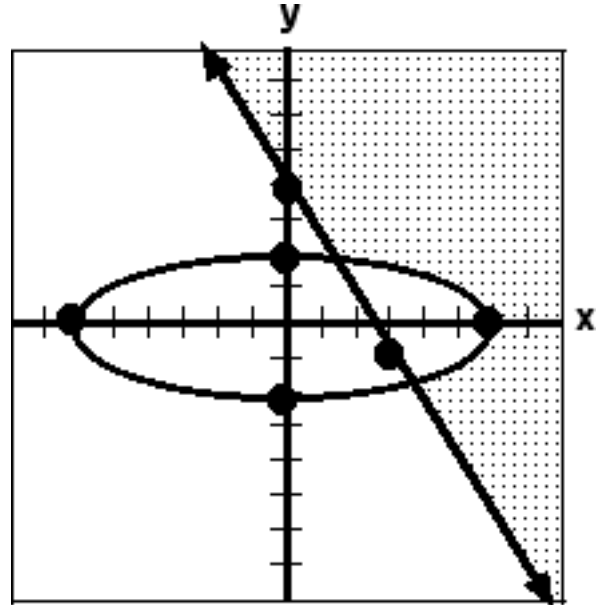
$$y \geq \frac{-2}{5}x + 2$$



$$\frac{x^2}{36} + \frac{y^2}{4} \geq 1$$

22.

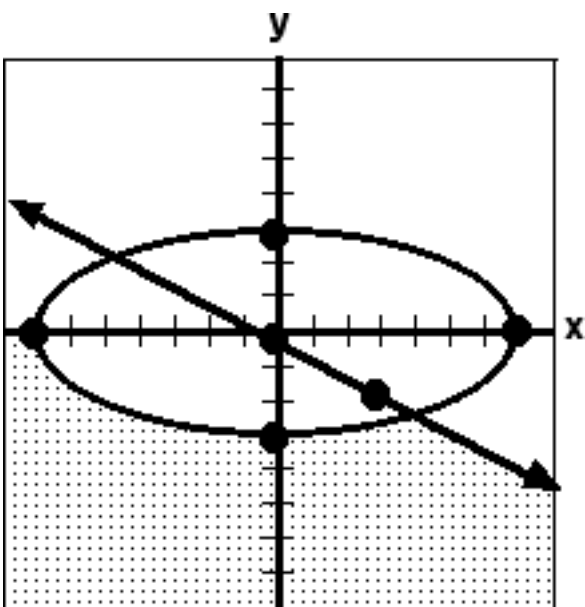
$$y \geq \frac{-5}{3}x + 4$$



$$\frac{x^2}{49} + \frac{y^2}{9} \geq 1$$

23.

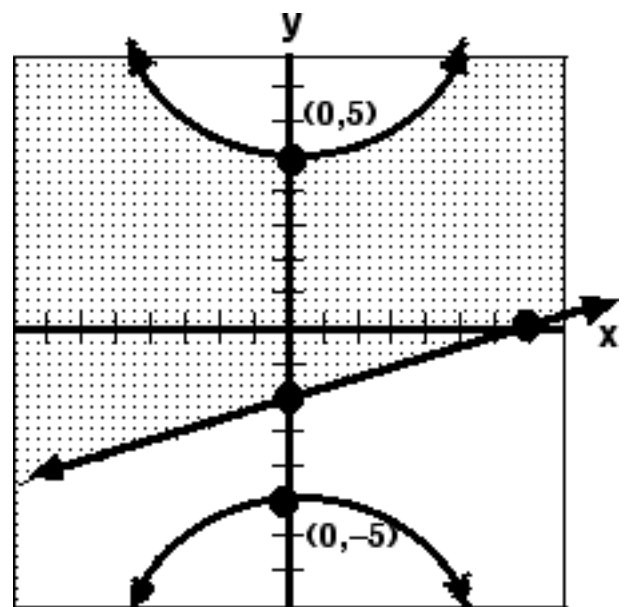
$$y \leq \frac{-2}{3}x$$



$$\frac{y^2}{25} - \frac{x^2}{4} \leq 1$$

24.

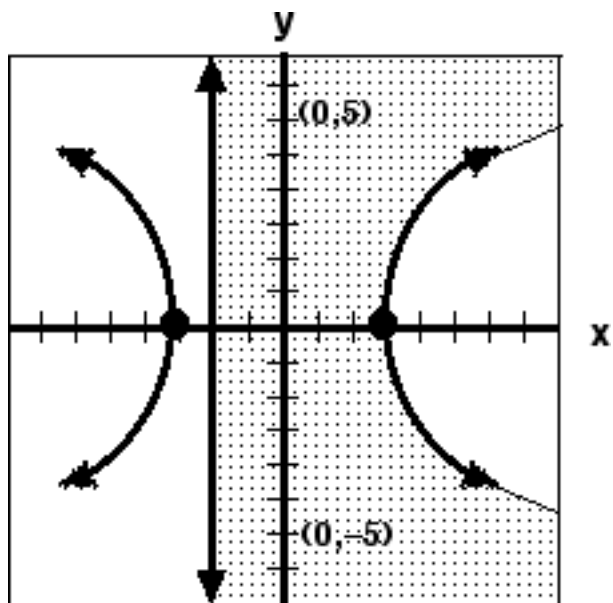
$$y \geq \frac{2}{7}x - 2$$



$$\frac{x^2}{9} - \frac{y^2}{49} \geq 1$$

25.

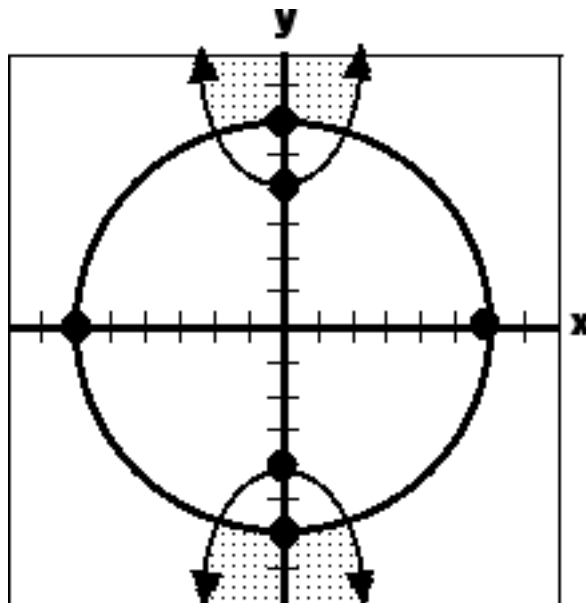
$$x \geq -3$$



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

26.

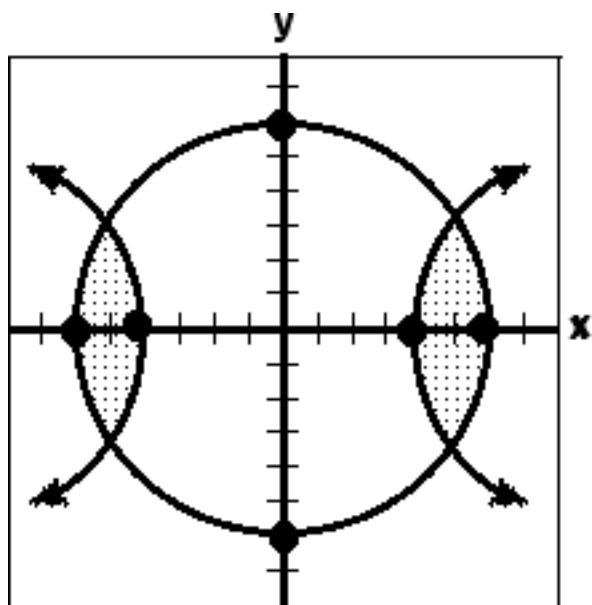
$$x^2 + y^2 \geq 36$$



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

27.

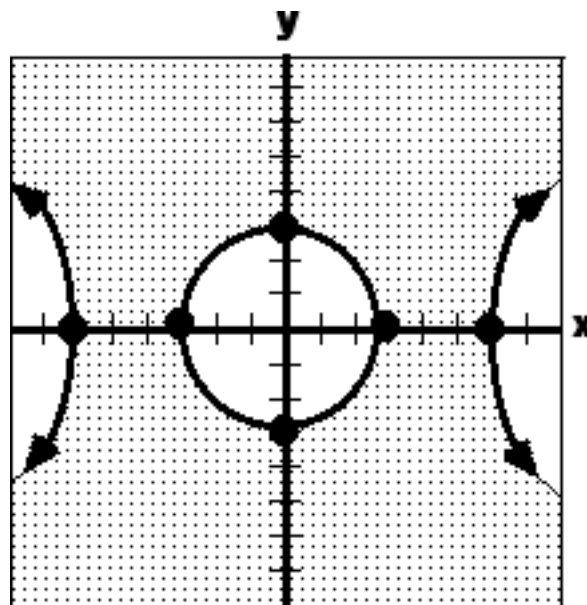
$$x^2 + y^2 \leq 36$$



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

28.

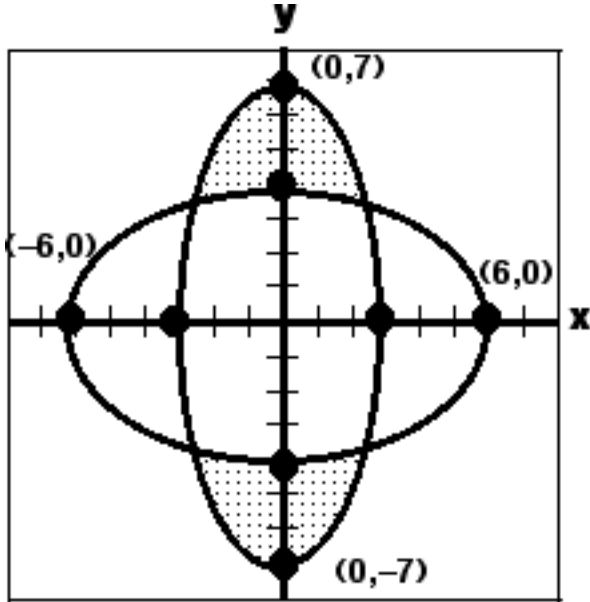
$$x^2 + y^2 \geq 9$$



$$\frac{x^2}{9} + \frac{y^2}{49} \leq 1$$

29.

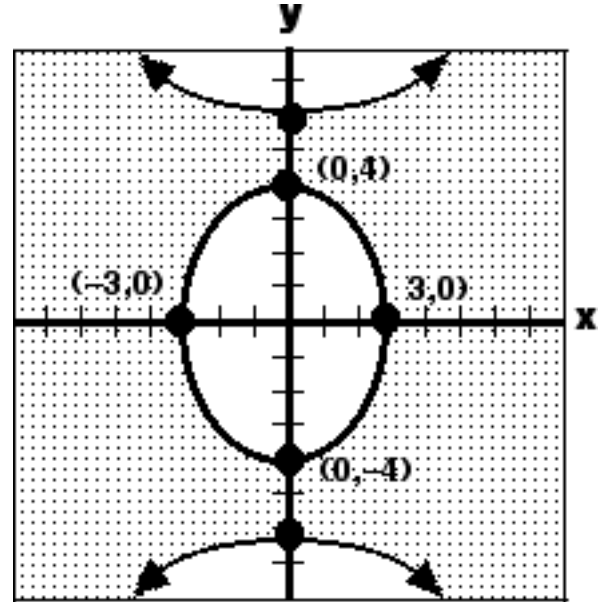
$$\frac{x^2}{36} + \frac{y^2}{16} \geq 1$$



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

30.

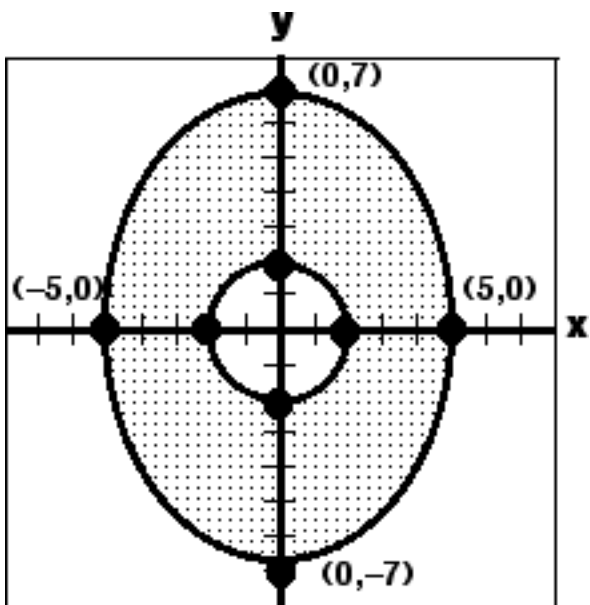
$$\frac{x^2}{9} + \frac{y^2}{16} \geq 1$$



$$\frac{y^2}{49} + \frac{x^2}{25} \leq 1$$

31.

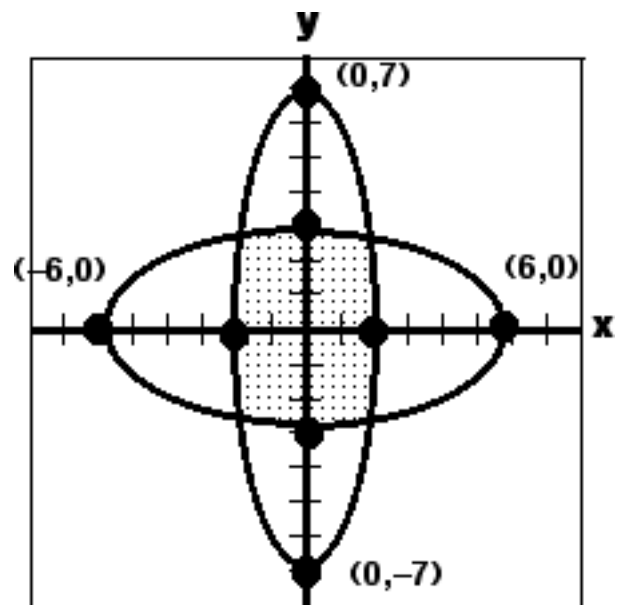
$$x^2 + y^2 \geq 4$$



$$\frac{x^2}{4} + \frac{y^2}{7} \leq 1$$

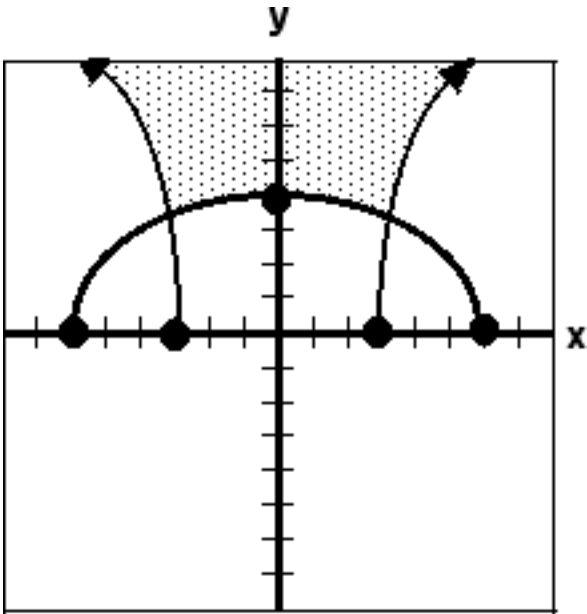
32.

$$\frac{x^2}{36} + \frac{y^2}{9} \leq 1$$



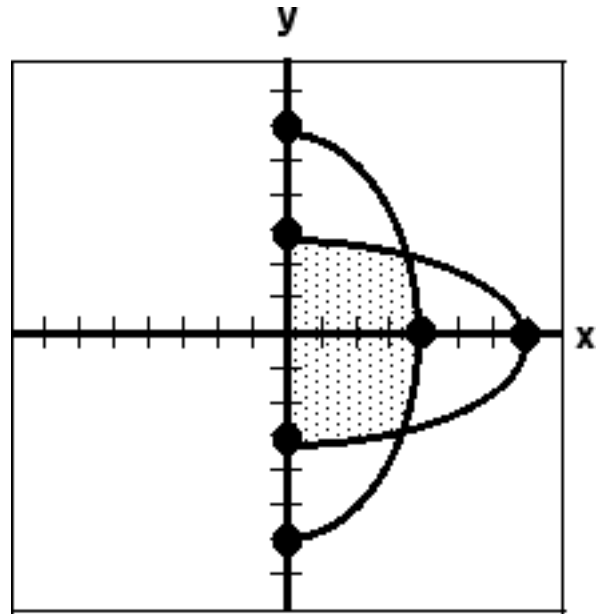
$$\frac{x^2}{9} - \frac{y^2}{4} \leq 1$$

33. $\frac{x^2}{36} + \frac{y^2}{16} \geq 1$
 $y \geq 0$



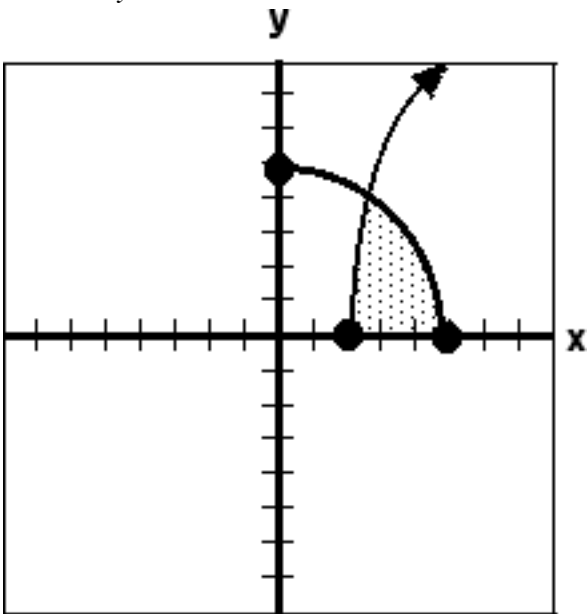
$$\frac{y^2}{36} + \frac{x^2}{16} \leq 1$$

34. $\frac{x^2}{49} + \frac{y^2}{9} \leq 1$
 $x \geq 0$



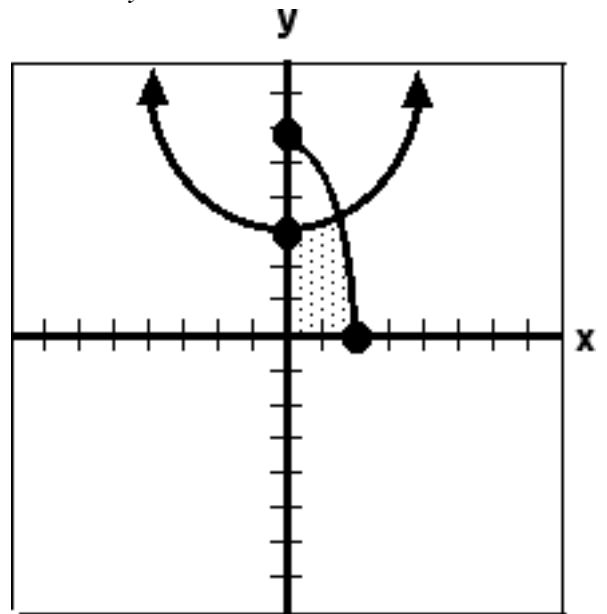
$$\frac{x^2}{4} - \frac{y^2}{9} \geq 1$$

35. $x^2 + y^2 \leq 25$
 $x \geq 0$
 $y \geq 0$



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

36. $y \leq x^2 + 2$
 $x \geq 0$
 $y \geq 0$



Section 11-6

1. $(-4, 2)$ $(-1, 1)$
2. $(1, 2)$
3. $(2, 1)$ $(1, 0)$
4. $(2, \sqrt{2})$
5. $(-4, -3)$ $(0, 5)$
6. $(4, 0)$ $(0, -2)$
7. $(-3, 4)$
8. $(-1, 0)$
9. $(1, -1)$ $\left(\frac{-1}{5}, \frac{7}{5}\right)$
10. $(0, -3)$ $\left(\frac{12}{5}, \frac{9}{5}\right)$
11. $(1, 2)$
12. $(3, 7)$ $(7, 3)$
13. $(1, -6)$ $(-3, 2)$
14. $\left(5, \frac{1}{2}\right)$ $\left(-2, \frac{-5}{4}\right)$
15. $(0, -2)$ $(\sqrt{3}, 1)$ $(-\sqrt{3}, 1)$
16. $(-\sqrt{3}, 0)$ $(\sqrt{3}, 0)$ $(\sqrt{5}, 2)$ $(-\sqrt{5}, 2)$
17. $(3, 2)$ $(3, -2)$ $(-3, 2)$ $(-3, -2)$
18. $(4, 1)$ $(4, -1)$ $(-4, 1)$ $(-4, -1)$
19. $(2, \sqrt{3})$ $(2, -\sqrt{3})$ $(-2, \sqrt{3})$ $(-2, -\sqrt{3})$
20. $(5, \sqrt{2})$ $(5, -\sqrt{2})$ $(-5, \sqrt{2})$ $(-5, -\sqrt{2})$
21. $(2, 1)$ $(2, -1)$ $(-2, 1)$ $(-2, -1)$
22. NO Sol. or NRS
23. $(\sqrt{3}, 1)$ $(\sqrt{3}, -1)$ $(-\sqrt{3}, 1)$ $(-\sqrt{3}, -1)$
24. $(2, 1)$ $(2, -1)$ $(-2, 1)$ $(-2, -1)$
25. $(1, 2)$ $(1, -2)$ $(-1, 2)$ $(-1, -2)$
26. $(2, 3)$ $(2, -3)$ $(-2, 3)$ $(-2, -3)$
27. $(\sqrt{6}, 2)$ $(\sqrt{6}, -2)$ $(-\sqrt{6}, 2)$ $(-\sqrt{6}, -2)$
28. No Sol. or NRS
29. $(2, \sqrt{3})$ $(2, -\sqrt{3})$ $(-2, \sqrt{3})$ $(-2, -\sqrt{3})$
30. $(1, 2)$ $(1, -2)$ $(-1, 2)$ $(-1, -2)$
31. $(1, 1)$ $(1, -1)$ $(-1, 1)$ $(-1, -1)$
32. $(4, 1)$ $(-4, 1)$ $(2, 2)$ $(-2, -2)$