

6. 0

7. 2

8. -2

9. 2

10. $x = 2, y = 0$

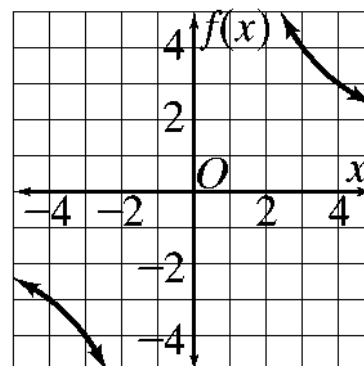
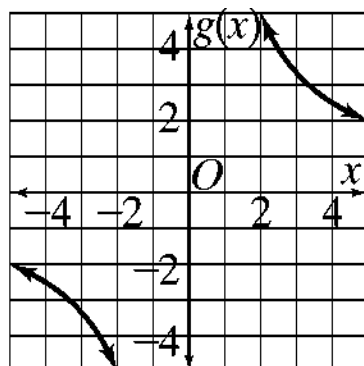
11. $x = -1, y = 0$

12. $x = 1, y = -1$

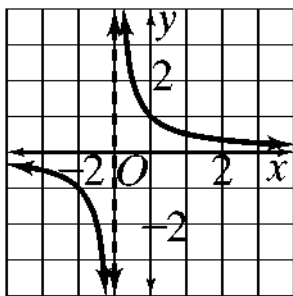
13. $x = 0, y = 2$

14. $x = 0$;

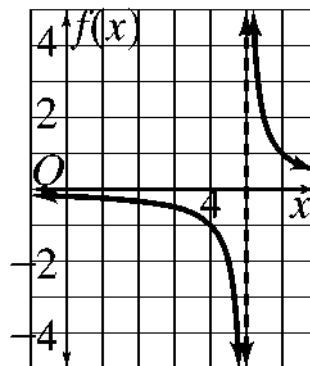
15. $x = 0$;



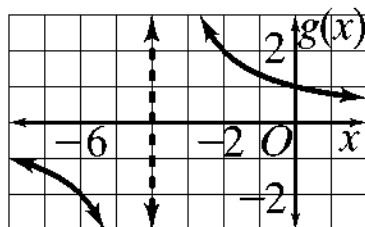
16. $x = -1$;



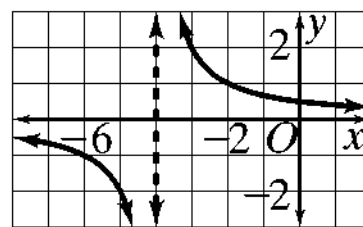
17. $x = 5$;



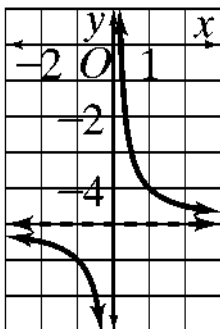
18. $x = -4$;



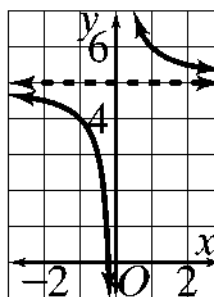
19. $x = -4$;



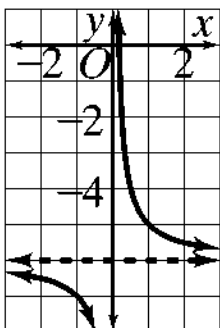
20. $x = 0, y = -5$;



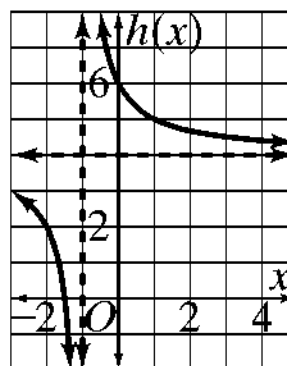
21. $x = 0, y = 5$;



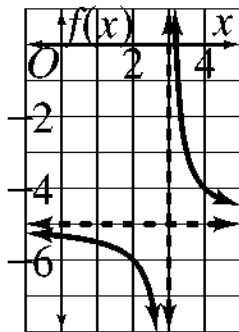
22. $x = 0, y = -6$;



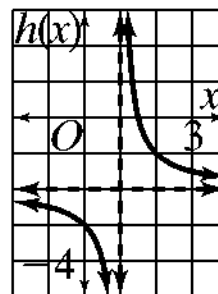
23. $x = -1, y = 4$;



24. $x = 3, y = -5;$



25. $x = 1, y = -2;$



26. line with slope 4, y-int. 1

27. absolute value function with vertex (4,0)

28. exponential decay

29. line with slope $\frac{1}{4}$, y-int. 0

30. rational function, with asymptotes $x = 0, y = 1$

31. radical function; $y = \sqrt{x}$ shifted right 4, up 1

32. parabola with axis of symmetry $x = 0$

33. rational function with asymptotes $x = -4, y = -1$

34. parabola with axis of symmetry $x = -\frac{1}{4}$

35. moves graph 1 unit to the left

36. moves graph 3 units to the right

37. lowers graph 15 units

38. moves graph 12 units left

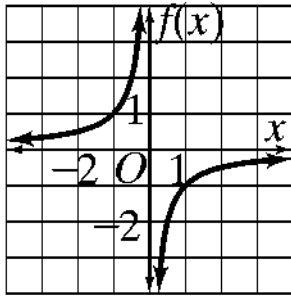
39. moves the graph up 12 units

40. moves the graph left 3 units

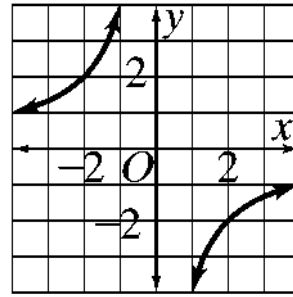
41. moves the graph down 2 units

42. moves the graph 3 units left and 2 units down

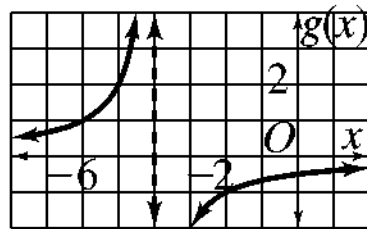
43. $x = 0, y = 0;$



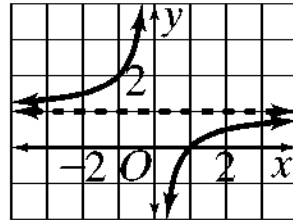
44. $x = 0, y = 0;$



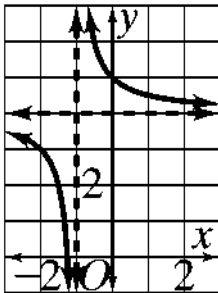
45. $x = -4, y = 0;$



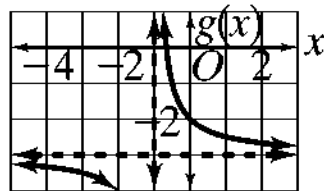
46. $x = 0, y = 1;$



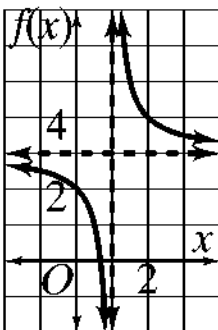
47. $x = -1, y = 4;$



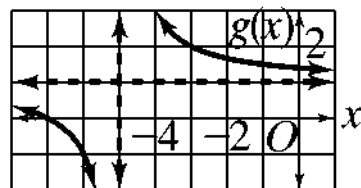
48. $x = -1, y = -3;$



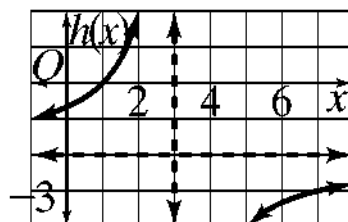
49. $x = 1, y = 3;$



50. $x = -5, y = 1;$

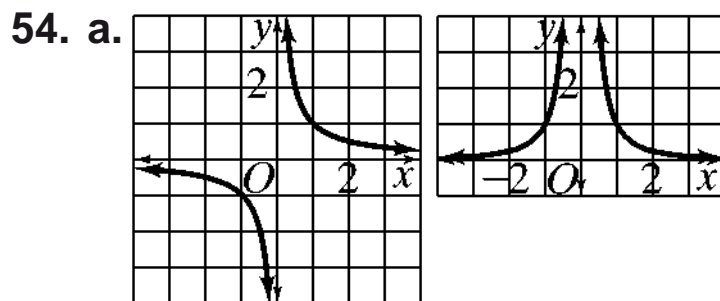


51. $x = 3, y = -2;$



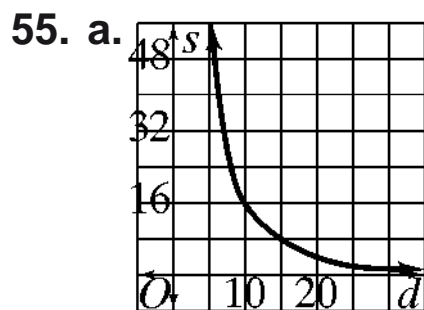
52. Answers may vary. Sample: $f(x) = \frac{1}{x} + 3$, $g(x) = \frac{1}{x}$

53. 17.8 lumens; $1.9\bar{7}$ lumens



b. $x = 0, y = 0; x = 0, y = 0$

c. y is any real number except 0; $y > 0$.

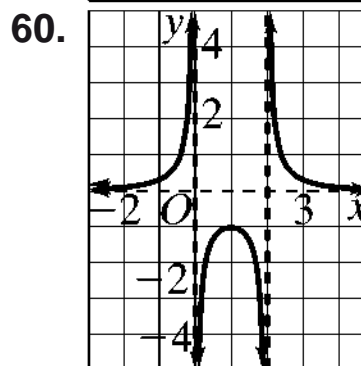
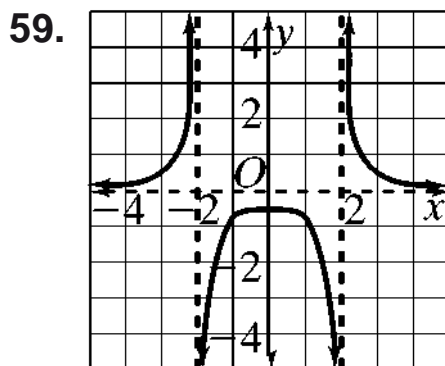
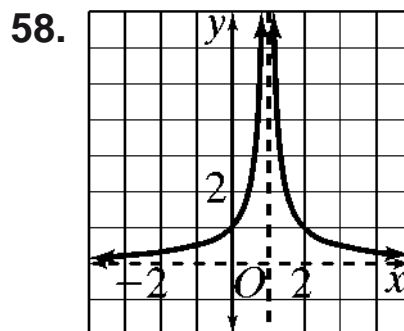
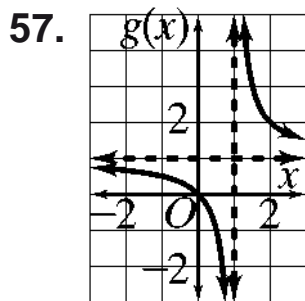


$d \geq 40$

b. 16; 1600; 160,000

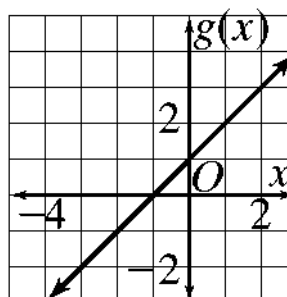
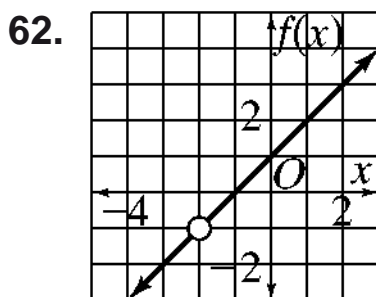
c. The signal is extremely strong when you are in the immediate vicinity of a transmitter and it will interfere with the other station.

56. The graph of $y = \frac{3}{x}$ and $y = -\frac{3}{x}$ are both composed of two curves with asymptotes $x = 0$ and $y = 0$. The graph of $y = -\frac{3}{x}$ is a reflection of the graph of $y = \frac{3}{x}$ over the y -axis.



61. a. $x = -3, y = -2$

b. $y = \frac{1}{x + 3} - 2$



No; $f(x) = \frac{(x + 2)(x + 1)}{x + 2}$ is equivalent to $g(x) = x + 1$ for all values except $x = -2$.