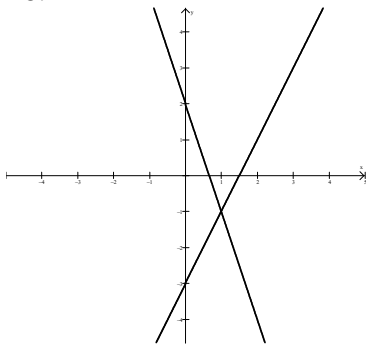


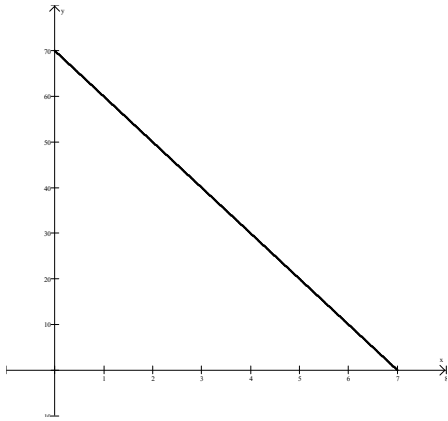
Functions 2008: Answer Key to Summer Assignment

1. $(x-8)(x+3)$
2. $9(x-3)(x+3)$
3. $(x-8)(x-2)$
4. $(4a-1)(a+1)$
5. $4a^3(a-2)(a+2)$
6. $3(x^2-2x-30)$
7. $(3x+5)(x+1)$
8. $r(r-15)(r+4)$
9. $(7h-2)(h+2)$
10. $(2x-y^2)(2x+y^2)(4x^2+y^4)$
11. $(x^3+3)(x-2)$
12. $(x-y-z)(x-y+z)$
13. $(x-1)(x+1)(x^2+1)(x^4+1)$
14. $(-4,1)$
15. $(-2,3)$
- 16.



- $(1, -1)$
17. 350 orchestra seats
 18. 4 ounces of 50% solution, 8 ounces of 20% solution
 19. $z = \frac{1}{3}$
 20. $c < -5$
 21. All real numbers
 22. $x = \frac{5}{2}, x = -4$
 23. $x = -\frac{9}{2}, x = 3$

24. $y > 3$
25. $3 < x < 6$
26. $y = 3, y = -7$
27. $-4 \leq y \leq 8$
28. $y > 6$ or $y < -10$
29. $-1 < x < \frac{2}{3}$
30. $x = 0, x = \frac{16}{7}$
31. $x = \pm \frac{3}{2}$
32. $x = 4$
33. $x = 17$
34. $y = 7$
35. No solution
36. $\frac{2\sqrt{10}}{5}$
37. $9\sqrt{6}$
38. $6\sqrt{3}$
39. $-1 - \sqrt{7}$
40. $\frac{9\sqrt{2}}{2}$
41. $\frac{1}{5}$
42. $12x^2y^4$
43. $-27r^9s^3t^6$
44. $\frac{5a^3}{6b}$
45. $\frac{16y^8}{27x^4z}$
46. x^{11}
47. $\frac{x^{15}z^6}{y^6}$
48. $y = -\frac{14}{5}x + \frac{66}{5}$
49. $x = 2$
50. $y = -\frac{2}{3}x + \frac{11}{3}$
51. a.)



b) Slope = -10 (Michelle is spending money 10 dollars/week more than she is earning) Y-Intercept = 70 (Michelle's initial amount of money)

c) $y = 70 - 10x$

52. 7.5 days

53. 2.4 miles

54. Midpoint: $(1, -3)$, Distance: $8\sqrt{2}$

55. $x = 8.34$

56. $x = 10.33, y = 3.76$

57. $x = 24$

58. $x = 6\sqrt{3}, y = 12$

59. $x = 49.39^\circ$

60. An isosceles triangle

61. $\sqrt{66}$

62. $2\sqrt{10}$

63. $2\sqrt{15}$

64. YES

65. YES

66. $\sqrt{1900} \approx 43.59$ feet

67. 82.16°