

Review of Algebra 1 Summer Packet Answer Key

1. $x = \frac{9}{4}$

2. $x = 3$

3. $x = -24$

4. $x = -\frac{4}{11}$

5. $x = 43$

6. $x = 3$

7. $y = \frac{1}{3}x + 5$

8. $x = \frac{y-b}{m}$

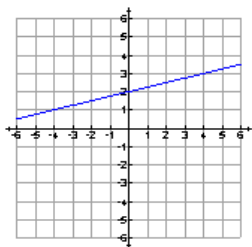
9. $F = \frac{9}{5}C + 32$

10. $m = -1$

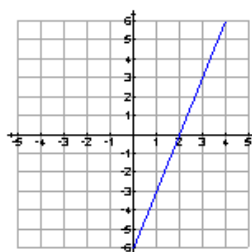
11. $m = \frac{1}{4}$

12. $m = 0$

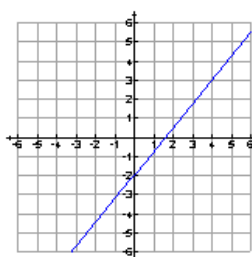
13. $y = \frac{1}{4}x + 2$



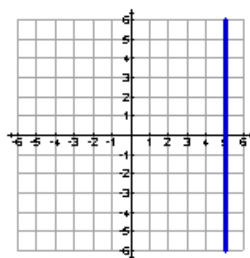
14. $y = 3x - 6$



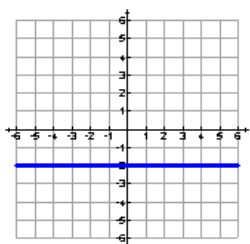
15. $y = \frac{5}{4}x - 2$



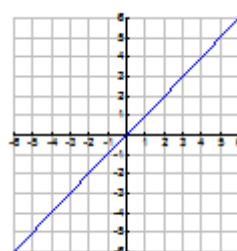
16. $x = 5$



17. $y = -2$



18. $y = x$



19. PSF: $y - 5 = 7(x + 2)$ or $y = 5 + 7(x + 2)$

SIF: $y = 7x + 19$

SF: $7x - y = -19$

20. PSF: $y + 3 = 3(x - 1)$ or $y = -3 + 3(x - 1)$

or $y - 3 = 3(x - 3)$ or $y = 3 + 3(x - 3)$

SIF: $y = 3x - 6$

SF: $3x - y = 6$

21. $y = \frac{1}{3}x - 1$

22. $y > 2x + 4$

23. $y = 2$

24. $x \geq -6$

25. $x \leq -\frac{3}{4}$

26. $-3 < x < 1$

27. $-9 \leq x \leq -3$

28. $(3, -10)$

29. no solution

30. $(1, -4)$

31. $x + y = 500$; $2x + 5y = 1789$

237 student tickets sold, 263 adult tickets

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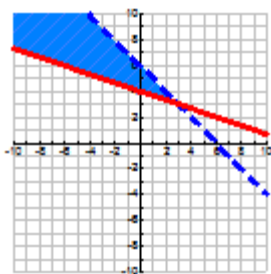
32. $x + y = 120$; $y = x + 20$

50 nickels, 70 dimes

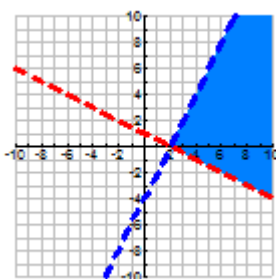
33. (3, -1)

34. (-3, -1)

35. $x + y < 6$; $y \geq \frac{1}{3}x + 4$



36. $y < 2x - 4$; $y \geq -\frac{1}{2}x + 1$



37. $y < \frac{2}{3}x + 2$

$y \geq -x - 3$

38. $u = 5$

39. $v = 5.4$ (rounded to 1 decimal place)

40. Yes

41. No

42. Quadratic Trinomial

43. Cubic Trinomial

44. linear monomial

45. $\frac{4}{x^6}$

46. $6x^7y^4$

47. $9x^2y^4$

48. $\frac{27b^4}{10ac^6}$

49. $\frac{y^9}{8x^{15}}$

50. $\frac{8x^{19}y^3}{5}$

51. $2z^3 + 2z^2 + 3z + 13$

52. $12t^4 - t - 8$

53. $x^2 + 4x - 45$

54. $3x^2 + 10x - 8$

55. $16x^2 + 56x + 49$

56. $6x^3 - 7x^2 - 36x + 40$

57. $2x^7 + 6$

58. $2x^5y^5 + 4x^3y^8$

59. $(x + 7)(x - 7)$

60. $(x - 6)(x - 5)$

61. $(x + 8)(2x - 3)$

62. $(2x - 5)^2$

63. $2x(x - 5)(x - 3)$

64. $(x - 5)(3x + 2)$

65. $V: (2, -2)$

66. $V: (-2, 0)$

67. $y = -x^2 + 6x - 2$

68. $y = 2x^2 + 32x + 123$

69. 2 solutions; a coefficient negative as its inverted.

70. 2 solutions; a coefficient positive as its upright.

71. no solutions; a coefficient positive as its upright.

72. Highest point: 30.625 m

Time to hit ground: 5 seconds

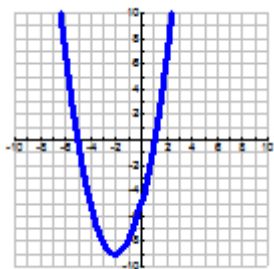
73. a. $h(4) = 96.6$ (At 4 seconds the ball is 96.6 meters from the ground)

b. 5 seconds

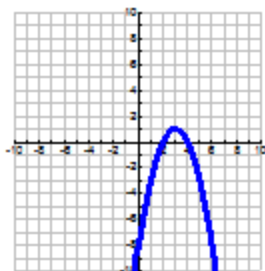
c. 6 seconds

74. $y = x^2 + 4x - 5$

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



76. function, continuous

77. function, discrete

78. D: all real numbers; R: $y \leq 4$

79. D: $x \geq 0$; R: all real numbers

80. a. $f(-2) = 21$ b. $x = 1, 3$

81. a. $f(8) = 41$ b. $x = -1, 7$

82. a. $f(2) = 3$

 b. $f(5) = 2$

 c. $x = 6$