

B2A2 Spring Exam Review KEY

- z^4
- $9x^2 - 6x - 1$
- $4(y^2 - 2)$
- $-6x^7$
- a) -4 b) -4
- $12x^3 - 12x^2 - 9x + 2$
- $100x^4 - 9$
- $4x^2 - 4xy + y^2$
- $100x^4 + 60x^2 + 9$
- $3m + 1$
- a) $\frac{1}{5}$ b) $\frac{1}{49}$
- 250
- slope = $m = \frac{7}{3}$ and y-int: $b = -\frac{2}{3}, (0, -\frac{2}{3})$
- a) 2 b) 5 c) 1 d) 6 e) 0
- $9x^2 - 6x - 1$
- $6x^2 - 11x - 10$
- $9y^2 + 6y + 1$
- a) $\frac{1}{9}$ b) $\frac{2}{x^3}$ c) $\frac{3}{4}$ d) $\frac{1}{16}$ e) $\frac{1}{y^4}$
- $25a^9$
- a) 3.67×10^8 b) 3×10^{-6} c) 2.052×10^{10} d) 8.5×10^{-4}
- $9x^2 - 42xy + 49y^2$
- $x + 4$
- $\frac{1}{x^{18}y^{21}}$
- a) x^7 b) y^7
- a) $(z^2 + 7)(z + 1)$ b) $(x + 4)(x + 3)$ c) $2x(x + 7)(x - 6)$ d) $(2x - 5)(4x - 1)$
e) $(x + 6)(-4x + 1)$ f) $(5a + 3b)(5a - 3b)$ g) $x(3y + 4)(3y - 4)$
- $x = 3, -1$
- $x = 9, 4$
- a) $\frac{a^6}{b^3c^9}$ b) $\frac{a^8c^6}{b^4}$ c) $\frac{16b^6}{a^6}$
- a) $28a^2 - 29a + 6$ b) $6a^2 - 7ab - 5b^2$
- a) x^3 b) 256 c) -27 d) $\frac{s^2}{t^3}$ e) $2x^4y$
- a) $3x(3x^2 + 9x - 5)$ b) $(2x - 5)(3y - 2)$ c) $(2x - 1)(y + 3)$
- $(x - 8)(x + 2)$
- $x = \frac{1}{5}, -\frac{3}{2}, -6$

34. $2a(x - 3y)^2$

35. $\frac{1}{5x-1}$

36. $x = \frac{1}{2}$

37. $\frac{2x^6y - 2x^2 + x^4y^2 - y}{x^3y^2}$

38. $(2m^2 - 1)^2$

39. $-x + 2$ or $x - 2$

40. $x = -10, 7$

41. $\frac{-a^2 - 8a + 2}{-1(a+4)(a-4)(a-2)}$

42. $x^2 - 6x + 8$

43. $x = -5$

44. $x = -1$

45. $x = -5$

46. 15 hours

47. $k = \frac{1}{6}; y = \frac{1}{6}x$

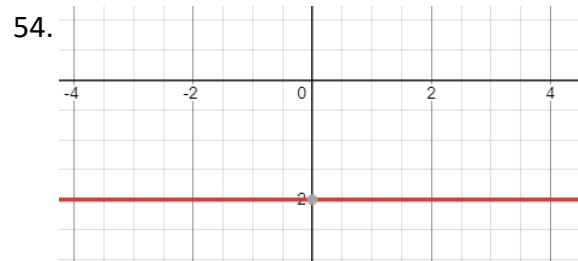
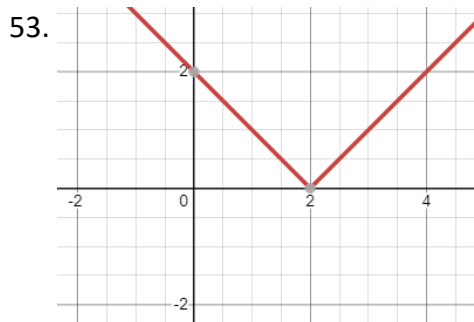
48. $k = 192, y = \frac{192}{x}$

49. $x = -1 \pm 2\sqrt{3}$

50. $y = 1 \pm 2\sqrt{6}$

51. $x = 9, 4$

52. $2 \pm 2\sqrt{3}$



D: $(-\infty, \infty)$ R: $[0, \infty)$ nonlinear

D: $(-\infty, \infty)$ R: $[-2]$ linear

55. $3x - 5$

56. $\frac{2m+1}{m+1}$

57. a) $\frac{x-2}{2(x+2)}$ b) $\frac{x^2}{y^2}$

58. a) $-(a^2 + 2a + 4)$ b) $\frac{3}{a+5}$

59. a) $\frac{9x-2y}{3x^2y^2}$ b) $\frac{3x(x-7)}{(x+3)(x-3)}$ c) $\frac{x+5}{x-2}$

60. $x=15$

61. $4x^2 - 1$ r. 9

62. $k = 15; u = \frac{15}{w}$

63. $k = 1.50\bar{3}; y = 1.50\bar{3}x$

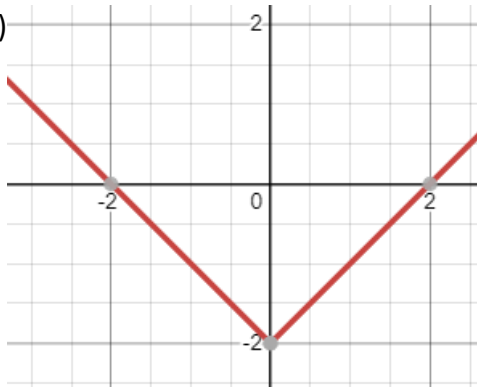
64. $\frac{3y^9}{160}$

65. $\frac{4x^3y}{5}$

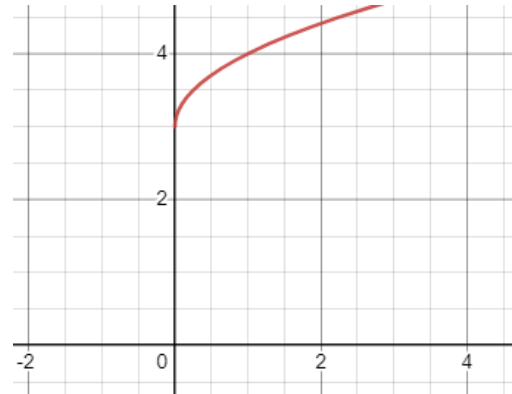
66. 1

67. $-4x$

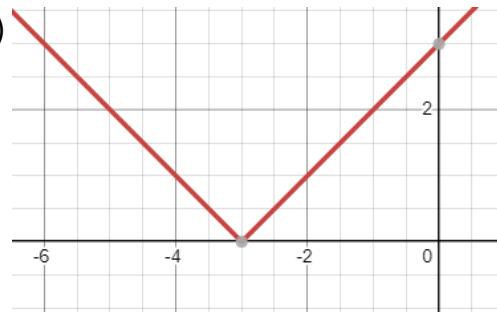
68. a)



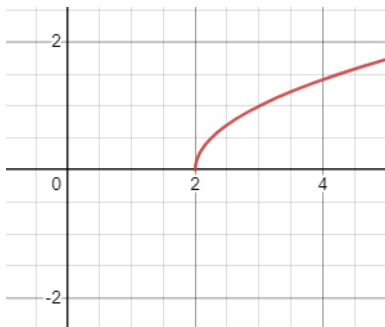
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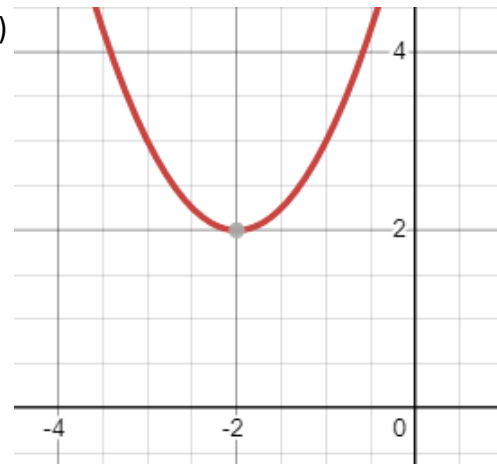
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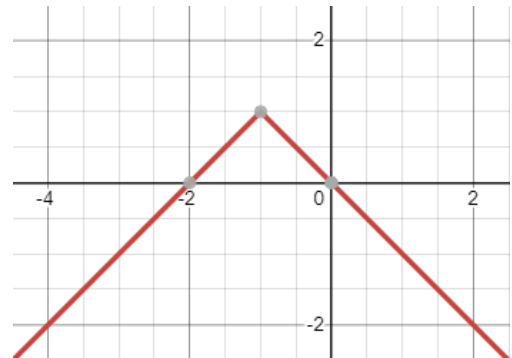
d)

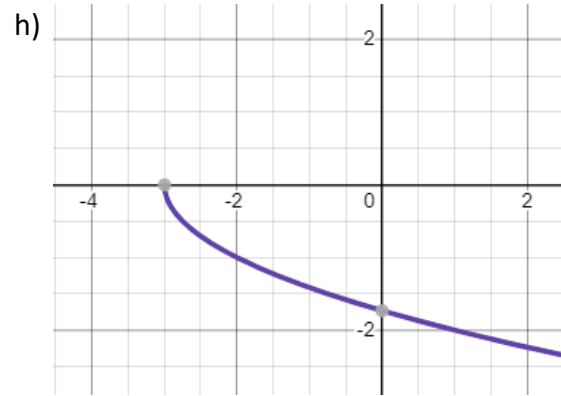
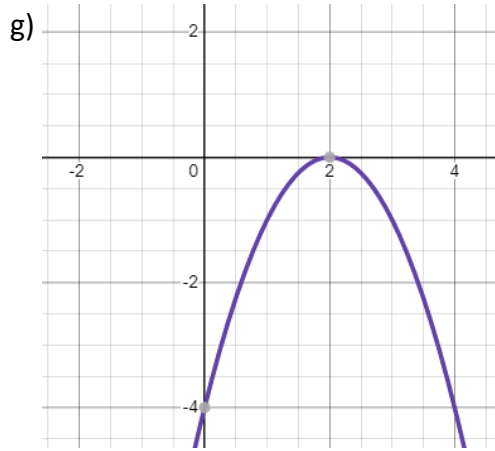


e)



f)





69) $b = 6\text{m}, 10\text{m}$

70) $b = 7\text{ft}, h = 26\text{ft}$

71) a) $(7y + 1)(3y + 2)$

b) $(5x + 2)(3x + 1)$

c) $(8x - 9)(x + 1)$

d) $(5x - 3)(6x - 1)$

e) $(2x - 1)(x - 3)$

f) $(5x + 2)^2$

g) $(2x - 5)(3x + 2)$

h) $2(2y + 3)(y - 2)$

i) $a(5a + 1)(2a + 3)$

j) $(7x - 5)(x - 1)$