1. $y' = 5x^4$
2. $y' = 4x^3$
3. $y' = 9x^2$
4. $y' = -x$
5. $y' = -5$
6. $y' = 7$
7. $y' = 0$
8. $y' = 0$
9. $y' = 12$
10. $y' = 14x - 9.4$
11. $y' = 15x^2 + 6x - 2$
12. $y' = -9.6x^2 + 6.1$
13. $y' = \dfrac{-3}{x^4}$
14. $y' = 3x^2$
15. $y' = \dfrac{18}{x^3}$
16. $y' = 3$
17. $y' = 3 - \dfrac{1}{x^2}$
18. $y' = 4 - \dfrac{6}{x^2}$
19. $y' = \dfrac{1}{2\sqrt{x}}$
20. $y' = \dfrac{-4}{\sqrt{x}}$
21. $y' = -7e^x$
22. $y' = 5e^x$
23. $y' = 2.1^x \ln(2.1)$
24. $y' = 3.5^x \ln(3.5)$
25. $y' = [12\ln(1.6)](1.6)^x$
26. $y' = [6\ln(0.8)](0.8)^x$
27. $y' = \left[40\ln\left(1 + \dfrac{0.05}{4}\right)\right]\left(1 + \dfrac{0.05}{4}\right)^{4x}$
28. $y' = \left[288\ln\left(1 + \dfrac{0.06}{12}\right)\right]\left(1 + \dfrac{0.06}{12}\right)^{12x}$
29. $y' = [4.2\ln(0.8)](0.8)^x$
30. $y' = [7\ln(1.3)](1.3^x) - e^x$
31. $y' = \dfrac{4}{x}$
32. $y' = -\dfrac{1}{x}$
33. $y' = \dfrac{-7}{x}$
34. $y' = 3.7e^x - \dfrac{2}{x}$
35. $y' = 16(3.2x + 5.7)^4$
36. $y' = -\dfrac{10x + 3}{(5x^2 + 3x + 7)^2}$
37. $y' = \dfrac{-24}{(x-1)^4}$
38. $y' = \dfrac{-1400}{(4x+7)^2}$
39. $y' = \dfrac{2x - 3}{2\sqrt{x^2 - 3x}}$
40. $y' = \dfrac{2x + 5}{2\sqrt{x^2 + 5x}}$

41. $y' = \dfrac{1}{x}$

42. $y' = \dfrac{2\ln 6x}{x}$

43. $y' = \dfrac{32x+37}{16x^2+37x}$

44. $y' = 3.7e^{3.7x}$

45. $y' = 43.2e^{0.6x}$

46. $y' = 8xe^{4x^2}$

47. $y' = 4.64e^{0.08x}$

48. $y' = 174e^{1+3x}$

49. $y' = \dfrac{-129.6e^{0.6x}}{(1+18e^{0.6x})^2}$

50. $y' = \dfrac{400.5e^{-1.2x}}{(1+8.9e^{-1.2x})^2}$

51. $y' = 3(\sqrt{x}-3x)^2\left(\dfrac{1}{2\sqrt{x}}-3\right)$

52. $y' = \sqrt{2}\ln(3)3^{\sqrt{2}x}$

53. $y' = \dfrac{\ln(2)2^{\ln x}}{x}$

54. $y' = \ln(2)$

55. $y' = \dfrac{1}{x}e^x + (\ln x)e^x = \left(\dfrac{1}{x}+\ln x\right)e^x$

56. $y' = e^x + (x+5)e^x = (x+6)e^x$

57. $y' = (6x+15)(32x^3+49) + (3x^2+15x+7)(96x^2) = 480x^4+1920x^3+672x^2+735$

58. $y' = [2.5\ln(0.9)](0.9^x)(\ln x) + 2.5(0.9)^x\dfrac{1}{x}$

59. $y' = (25.6x+3.7)[29(1.7)^x] + (12.8x^2+3.7x+1.2)[29\ln(1.7)(1.7)^x]$

60. $y' = 25(5x+29)^4(15x+8) + 15(5x+29)^5 = (5x+29)^4(450x+635)$

61. $y' = 3(11.4x+3.5)(5.7x^2+3.5x+2.9)^2(3.8x^2+5.2x+7)^{-2} + (5.7x^2+3.5x+2.9)^3(-2)(7.6x+5.2)(3.8x^2+5.2x+7)^{-3}$

62. $y' = \dfrac{6x^2(2.7x+15)-2.7(2x^3+3)}{(2.7x+15)^2}$

63. $y' = \dfrac{[12.6\ln(4.8)](4.8)^x x^2 - 12.6(4.8)^x(2x)}{x^4} = \dfrac{12.6(4.8)^x(x\ln(4.8)-2)}{x^3}$

64. $y' = 16x\left(\dfrac{39}{1+15e^{-0.09x}}\right) + (8x^2+13)\left(\dfrac{52.65e^{-0.09x}}{(1+15e^{-0.09x})^2}\right)$

65. $y' = 79\left(\dfrac{198}{1+7.68e^{-0.85x}}+15\right) + 79x\left(\dfrac{1292.544e^{-0.85x}}{(1+7.68e^{-0.85x})^2}\right)$

66. $y' = \dfrac{3}{x}(e^{15.7x^3}) + [\ln(15.7x^3)](47.1x^2)e^{15.7x^3} = e^{15.7x^3}\left[\dfrac{3}{x} + 47.1x^2\ln(15.7x^3)\right]$

67. $y' = \dfrac{430(0.62^x)\ln(0.62)(6.42 + 3.3(1.46^x)) - 430(0.62^x)3.3(1.46^x)\ln(1.46)}{(6.42 + 3.3(1.46^x))^2}$

68. $y' = \dfrac{12}{x}(17 - 3\ln 4x) + (19 + \ln(2x))\dfrac{-3}{x}$

69. $y' = 4\sqrt{3x+2} + \dfrac{6x}{\sqrt{3x+2}}$

70. $y' = \dfrac{4(3^x)(\ln 3)\sqrt{x} - 4(3^x)\frac{1}{2\sqrt{x}}}{x} = \dfrac{2(3^x)(2x\ln 3 - 1)}{x\sqrt{x}}$

71. $y' = \dfrac{14(1 + 12.6e^{-0.73x}) - 14x(9.198e^{-0.73})}{(1 + 12.6e^{-0.73x})^2}$

72. $y' = \dfrac{(6x-17)(x-2)^2 - (3x^2 - 17x + 4)2(x-2)}{(x-2)^4} = \dfrac{5x + 26}{(x-2)^3}$