Nom: .....

1. $y = 5x^4 - 3x^2 + 6x$

   y'=

2. $y = 3 - x^2$

   y'=

3. $y = 3x^{-2} + 5x^{-3} + 2x^{-1}$

   y'=

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

   y'=

5. $y = x^2(x+6)$

   y'=

6. $y = x^6 - 6x^4$

y'=

7. $y = 3\left(\frac{1}{x^3} + \frac{1}{x^5}\right)$

y'=

8. $y = \left(x^2 - 4\right)\left(x^4 + 3\right)$

y'=

9. $y = \frac{1}{x^3} - \frac{2}{x^6}$

y'=

10. $y = \left(a - bx + cx^2\right)^2$

y'=

11. $y = \frac{x^3 + 2}{7}$

y'=

12. $y = \dfrac{1-2x}{2-x}$

y'=

13. $y = \dfrac{1}{x^2+2x+1}$

y'=

14. $y = \dfrac{1+\sqrt{x}}{1-\sqrt{x}}$

y'=

15. $y = \dfrac{2x-1}{2x+1}$

y'=

16. $y = (x+2)\sqrt{x^2+4x}$

y'=

17. $y = \dfrac{x^2}{x-2}$

y'=

18. $y = x^3 - 2\sqrt{x} + \frac{4}{\sqrt{x}}$

y'=

19. $y = \sqrt{3x^2 - 4x + 1}$

y'=

20. $y = \sqrt[3]{3x^2} + 10$

y'=

21. $y = x\sqrt{x^2 + 2}$

y'=

22. $y = \sqrt[3]{1+2x}\sqrt{1+3x}$

y'=

23. $y = \sqrt[4]{x^3 + 2}$

y'=

24. $y = \sqrt[3]{13-5x}$

y'=

25. $y = \sin 2x$

y'=

26. $y = \dfrac{\sqrt{x+9}}{x}$

y'=

27. $y = \sin x^2$

y'=

28. $y = \sqrt{\dfrac{x}{4-x^2}}$

y'=

29. $y = \sin 2x^2$

y'=

30. $y = x\left(x^2 - 1\right)^2$

y'=

31. $y = \sin(x^2 + 3x)$

y'=

32. $y = \dfrac{1}{\sqrt{1 - x^2}}$

y'=

33. $y = 5\cos^2 x + 3\cos^3 x$

y'=

34. $y = \ln(2x - 1)$

y'=

35. $y = \sin x^2 \cos x^3$

y'=

36. $y = \ln(x^2 - 1)$

y'=

37. $y = \sin^4 x \cos^4 x$

y'=

38. $y = \ln(x^2 - 3x - 1)$

y'=

39. $y = \dfrac{\sin x + \cos x}{\cos x - \sin x}$

y'=

40. $y = x^2 \ln(2 - x)$

y'=

41. $y = \left(\dfrac{x^2 + 2}{4x + 2}\right)^3$

y'=

42. $y = \dfrac{\ln x}{x}$

y'=

43. $y = \left(\dfrac{1+\sin x}{\cos x}\right)^2$

y'=

44. $y = \dfrac{\ln(ax+b)}{x^2}$

y'=

45. $y = \arcsin 3x^2$

y'=

46. $y = \ln\left(x^n(x+2)\right)$

y'=

47. $y = \ln(1+x^2)$

y'=

48. $y = \dfrac{x}{\sqrt{x^2 + a^2}}$

y'=

49. $y = \ln(1 + \sqrt{x})$

y'=

50. $y = \ln\sqrt{(1-x)x}$

y'=

51. $y = \ln \sin x^3$

y'=

52. $y = \ln\left(x + \sqrt{x^2 - 1}\right)$

y'=

53. $y = \ln \dfrac{3-5x}{2x+7}$

y'=

54. $y = e^{4x}$

y'=

55. $y = \ln \dfrac{x^2}{\sqrt{x^2+1}}$

y'=

56. $y = e^{a+bx}$

y'=

57. $y = \ln\left(x\sqrt{x^2-1}\right)$

y'=

58. $y = x^3 e^{3x}$

y'=

59. $y = e^{\sin x}$

y'=

60. $y = \dfrac{e^{ax}}{\sqrt{x}}$

y'=

61. $y = \left(x^2 + 1\right)e^{2x}$

y'=

62. $y = a^{nx}$

y'=

63. $y = \ln \cos e^{x}$

y'=

64. $y = \dfrac{1}{e^{2x}}$

y'=

65. $y = \left(\dfrac{1}{x} + \dfrac{1}{x^2}\right)e^{x}$

y'=

66. $y = 10^{\frac{x}{2}}$

y'=

67. $y = \dfrac{e^{5x}}{1+e^{x}}$

y'=

68. $y = \ln(xe^{x})$

y'=

69. $y = \ln\dfrac{1-e^{x}}{1+e^{x}}$

y'=

70. $y = \ln\dfrac{\sqrt{x^{2}+1}-x}{\sqrt{x^{2}+1}+x}$

y'=

71. $y = \ln\left(\cos^{2}x - \sin^{2}x\right)$

y'=

72. $y = \tan\sqrt{x}$

y'=

73. $y = \ln\dfrac{\sqrt{1+x^2}}{1+x} + \operatorname{arctg} x$

y'=

74. $y = \sin^2 x$

y'=

75. $y = x\sqrt{a^2 - x^2} + a^2 \arcsin\dfrac{x}{a}$

y'=

76. $y = \sin 5x$

y'=

77. $y = \operatorname{arctg}\dfrac{x+2}{1-2x} + \sqrt{x^2+1}$

y'=

78. $y = \cos\dfrac{x^2}{p}$

y'=

79. $y = \ln(\ln x)$

y'=

80. $y = \tan 3x$

y'=

81. $y = \sin(\sin x)$

y'=

82. $y = \cot x^5$

y'=

83. $y = \left(\operatorname{arctg} x\right)^2$

y'=

84. $y = \sec 5x$

y'=

85. $y = \sin\sqrt{1-20^x}$

y'=

86. $y = \sqrt{\sin x}$

y'=

87. $y = \sqrt{\frac{e^{3x}}{e^x}}$

y'=

88. $y = \sqrt{\operatorname{cosec} x}$

y'=

89. $y = \sin\left(\arccos\sqrt{1-\sin^2 x}\right)$

y'=

90. $y = \dfrac{\cos x}{x}$

y'=

91. $y = \ln\sqrt{\sin 2x}$

y'=

92. $y = \left(\cos^2 x - \sin^2 x\right)^2 + \left(2\sin x \cos x\right)^2$

y'=

93. $y = e^{ax}\sin \pi x$

y'=

94. $y = \dfrac{1}{3}\tan^3 x + \tan x + x$

y'=

95. $y = \sin x \sin 2x$

y'=

96. $y = \ln(\cos x)$

y'=

97. $y = \arcsin(2x - 3)$

y'=

98. $y = \arccos x^2$

y'=

99. $y = \sin(x + a)\cos(x + a)$

y'=

100. $y = e^{-x}\cos\frac{x}{2}$

y'=