HW 233
Combination of Rules

Name_____ Pd_____

39. $f(t) = t^2 \sin t$

40. $f(\theta) = (\theta + 1)\cos\theta$

41. $f(t) = \dfrac{\cos t}{t}$

42. $f(x) = \dfrac{\sin x}{x}$

43. $f(x) = -x + \tan x$

44. $y = x + \cot x$

45. $g(t) = \sqrt[4]{t} + 8\sec t$

46. $h(s) = \dfrac{1}{s} - 10\csc s$

47. $y = \dfrac{3(1 - \sin x)}{2\cos x}$

48. $y = \dfrac{\sec x}{x}$

49. $y = -\csc x - \sin x$

50. $y = x \sin x + \cos x$

51. $f(x) = x^2 \tan x$

52. $f(x) = \sin x \cos x$

53. $y = 2x \sin x + x^2 \cos x$

54. $h(\theta) = 5\theta \sec \theta + \theta \tan \theta$

Algebraic Challenges

25. $f(x) = \dfrac{3 - 2x - x^2}{x^2 - 1}$

27. $f(x) = x\left(1 - \dfrac{4}{x + 3}\right)$

29. $f(x) = \dfrac{2x + 5}{\sqrt{x}}$

31. $h(s) = (s^3 - 2)^2$

33. $f(x) = \dfrac{2 - \dfrac{1}{x}}{x - 3}$

35. $f(x) = (3x^3 + 4x)(x - 5)(x + 1)$

36. $f(x) = (x^2 - x)(x^2 + 1)(x^2 + x + 1)$

37. $f(x) = \dfrac{x^2 + c^2}{x^2 - c^2}$, c is a constant

38. $f(x) = \dfrac{c^2 - x^2}{c^2 + x^2}$, c is a constant