Name_____

Find the derivative. Do NOT simplify.

1) $\frac{d}{dx}[x^2 + 4x - 5]$

2) $\frac{d}{dx}[e^x + x^4 + e]$

3) $\frac{d}{dx}[\tan(x) + \sec(x)]$

4) $\frac{d}{dx}[2^x + \sqrt{x}]$

5) $\frac{d}{dx}[x\sqrt{x+1}]$

6) $\frac{d}{dx}\left[\frac{(x+1)}{e^x-1}\right]$

7) $\frac{d}{dx}[\arcsin(2x)]$

8) $\frac{d}{dx}[\ln(x+3)]$

9) $\frac{d}{dx}[\arctan(5x)\ ]$

10) $\frac{d}{dx}\left[\ln\left(\frac{x-1}{x+1}\right)\right]$

11) $\frac{d}{dx}[\sin(\tan x)]$

12) $\frac{d}{dx}[\ln(\cos x)]$

13) $\frac{d}{dx}[x - x\ln x]$

14) $\frac{d}{dx}\left[3^{x^2}\cos x\right]$

15) $\frac{d}{dx}[-x\arccos x]$

16) $\frac{d}{dx}[x\sin(x)\ln(x)]$

17) $\frac{d}{dx}\left[x\sqrt[3]{x^2+1}\right]$

18) $\frac{d}{dx}\left[\frac{\sin x}{x^2+1}\right]$

19) $\frac{d}{dx}[\ln(x(x+2))]$

20) $\frac{d}{dx}[\tan(x^2-1)]$

21) $\frac{d}{dx}[\arctan(3x)]$

22) $\frac{d}{dx}[\ln(x^2+x)]$

23) $\frac{d}{dx}[\arcsin(1-e^{3x})]; x \leq \frac{1}{3}\ln 2$

24) $\frac{d}{dx}\left[\int_3^x (\ln(t-2)+\sec t)dt\right]$

25) $\frac{d}{dx}\left[\int_2^{\sin(x)} \sqrt{t+t^3}dt\right]$

26) $\frac{d}{dx}\left[\int_x^{x^2} \arctan(\ln t)dt\right]$

27) $\frac{d}{dx}\left[\sqrt[4]{(\sin(x^2))^3+2x}\right]$