1.(1 pt) Evaluate the indefinite integral.

$$\int x^2 \arctan(4x)dx$$

[NOTE: Remember to enter all necessary (and) !!
Enter arctan(x) for $\tan^{-1} x$, arcsin(x) for $\sin^{-1} x$.]

2.(1 pt) Evaluate the indefinite integral.

$$\int \ln(x^2+10x+16)dx$$

3.(1 pt) Evaluate the indefinite integral.

$$\int x\cos^2(8x)dx$$

4.(1 pt) Evaluate the indefinite integral.

$$\int \frac{(\arcsin x)^3}{\sqrt{1-x^2}}dx$$

5.(1 pt) Evaluate the indefinite integral.

$$\int \frac{e^{8x}}{e^{16x}+64}dx$$

6.(1 pt) Find the indicated integrals.

(a) $\int \frac{\ln(x^4)}{x}\,dx =$ _____ $+C$

(b) $\int \frac{e^t\cos(e^t)}{5+5\sin(e^t)}\,dt =$ _____ $+C$

(c) $\int_0^{4/5} \frac{\sin^{-1}\left(\frac{5}{4}x\right)}{\sqrt{16-25x^2}}\,dx =$ _____

7.(1 pt) Find the indicated integrals (if they exist)

$\int x^2\sqrt{6x+3}\,dx =$

$\int_{-\infty}^{\infty} \frac{e^{3x}}{e^{6x}+1}\,dx =$ _____

$\int \frac{7x+4}{6x^2+19x+3}\,dx =$

$\int \frac{\ln(x)}{x^6}\,dx =$