Math 181 Name _____
Fall, 2008

Homework #5
Due Monday, September 15
No late paper accepted! No excuses!

1. Evaluate the integral.
   a) $\int \arcsin x dx$

b) $\int \cos(\ln x)dx$

c) $\int e^{-x}\cos(2x)dx$

d) $\int \cos x \cos^5(\sin x) dx$

2. Find the volume obtained by rotating the region bounded by $y = \cos x, y = 0, x = 0, x = \pi/2$ about the line y = 1.

3. A particle that moves along a straight line has velocity $v(t) = t^2 e^{-t}$ meters per second after t seconds. How far will it travel during the first t seconds?