A few review items for Exam 2.

In the formulas below you should assume $u = u(x)$ is a function of x.

$F(x)$	$F'(x)$
c	0
u^n	$nu^{n-1}\frac{du}{dx}$
$\sin(u)$	$\cos(u)\frac{du}{dx}$
$\cos(u)$	$-\sin(u)\frac{du}{dx}$
$\tan(u)$	$\sec^2(u)\frac{du}{dx}$
$\sec(u)$	$\sec(u)\tan(u)\frac{du}{dx}$
$\csc(u)$	$-\csc(u)\cot(u)\frac{du}{dx}$
$\cot(u)$	$-\csc^2(u)\frac{du}{dx}$
a^u	$a^u \ln(a)\frac{du}{dx}$
$\log_a(u)$	$\frac{1}{u\ln a}\frac{du}{dx}$
$\sin^{-1}(u)$	$\frac{1}{\sqrt{1-u^2}}\frac{du}{dx}$
$\cos^{-1}(u)$	$\frac{-1}{\sqrt{1-u^2}}\frac{du}{dx}$
$\tan^{-1}(u)$	$\frac{1}{1+u^2}\frac{du}{dx}$

Product Rule: $(f(x)g(x))' = f'(x)g(x) + f(x)g'(x)$

Quotient Rule: $(\frac{f(x)}{g(x)}))' = \frac{g(x)f'(x)-f(x)g'(x)}{g(x)^2}$.

Chain Rule: $(f(g(x))' = f'(g(x))g'(x)$.

Also review implicit differentiation, logarithmic differentiation, related rates problems, linear approximations and differentials.