1.) (5 pts.) Find an antiderivative of $g(x) = 4\sin x + 3\cos x$.

2.) (5 pts.) Use the Product Rule to compute $f'(x)$ if $f(x) = x^2\sin x$. 

Your grade is based on correctness, completeness, and clarity on each exercise. You may use a calculator, but no notes, books, or other students. Good luck!