MAT 142
Problem Set #2

due in class on February 3, 2005

1. Apostol, section 5.8 # 1–10
2. Apostol, section 5.8 # 16, 19, 20
3. Apostol, section 5.10 # 3–5, 7, 8, 10
4. Let f and g be differentiable functions. Assume that you already know a primitive, F, of f. Use the quotient rule for derivatives to find a formula for

$$\int \frac{f}{g}(x)\,dx$$

in terms of f, g, and F.