58. Find antiderivatives of the following functions f:

    (a) $f(x) = c(3x + 1)$;

    (b) $f(x) = xe(x^2)$;

    (c) $f(x) = \frac{1}{c(x)}$;

    (d) $f(x) = e(x)s(x)$;

    (e) $f(x) = \frac{x^2}{1+x^3}$;

    (f) $f(x) = \frac{x^3}{1+x^3}$.

59. Find $\int_a^x g'/g$ and $\int_a^x g'g$.

60. For continuous $f : \mathbb{R} \to \mathbb{R}$, define $G(x) = \int_0^x (x - t)f(t)\mathrm{d}t$ and show $G'' = f$.

61. Use the substitution rule to evaluate the following integrals:

    (a) $\displaystyle\int_{-1/\sqrt{2}}^{1/\sqrt{2}} (1 - 2x^2)(1 - x^2)^{-1/2}\mathrm{d}x$;   (b) $\displaystyle\int_0^{5p/2} \frac{s(t)}{2 + c(t)}\mathrm{d}t$.