[1]   Evaluate each integral.

(a) $\displaystyle \int x - \frac{3}{\left(2x+3\right)^2} \, dx$

(b) $\displaystyle \int t^2 \sqrt[3]{t^3 - 1} \, dt$

(c) $\displaystyle \int \frac{x+1}{\sqrt{x^2 + 2x - 4}} \, dx$

(d) $\displaystyle \int \frac{2x}{x-4} \, dx$

(e) $\int \left(\dfrac{1}{3x-1} - \dfrac{1}{3x+1} \right) dx$

(f) $\int x \left(1 + \dfrac{1}{x} \right)^3 dx$

(g) $\int \sec(4x)\, dx$

(h) $\int \dfrac{\sin x}{\sqrt{\cos x}} dx$

(i) $\int \csc^2 x \, e^{\cot x} \, dx$

(j) $\int (\tan x) \left[\ln(\cos x) \right] dx$

(k) $\int \dfrac{1 + \cos \alpha}{\sin \alpha} \, d\alpha$

(l) $\displaystyle\int \frac{2}{3(\sec x - 1)}\,dx$

(m) $\displaystyle\int \frac{e^{1/t}}{t^2}\,dt$

(n) $\displaystyle\int \frac{5}{3e^x - 2}\,dx$

(o) $\displaystyle\int \cot^2\left(\frac{x}{2}\right) dx$

(p) $\displaystyle\int \sec(2x)\tan(2x)\, 2^{\sec(2x)}\, dx$

(q) $\displaystyle\int e^{x+e^x}\, dx$

(r) $\displaystyle\int \frac{e^{2x}}{1+e^x}\,dx$

(s) $\displaystyle\int \frac{\sqrt{x}}{1+x^3}\,dx$

(t) $\displaystyle\int \frac{e^{\tan^{-1}x}}{1+x^2}\,dx$