

$$\int_{dt} {}^t\mathfrak{s}^n = -\frac{{}^{\mathfrak{s}}{}^{n-1}\mathfrak{c}}{n} + \frac{n-1}{n} \int_{dt} {}^t\mathfrak{s}^{n-2} \begin{cases} \int_{dt} {}^t\mathfrak{s}^{2m} = -\frac{{}^{\mathfrak{s}}{}^{2m-1}\mathfrak{c}}{2m} + \frac{m-1/2}{m} \int_{dt} {}^t\mathfrak{s}^{2m-2} \\ \int_{dt} {}^t\mathfrak{s}^{2m+1} = -\frac{{}^{\mathfrak{s}}{}^{2m}\mathfrak{c}}{2m+1} + \frac{m}{m+1/2} \int_{dt} {}^t\mathfrak{s}^{2m-1} \end{cases}$$

$$\begin{aligned} {}^{3t}\mathfrak{s}^2 \lceil -\frac{1}{6} {}^{3t}\mathfrak{c} {}^{3t}\mathfrak{s} + \frac{1}{2} t : & \quad {}^{5t}\mathfrak{s}^2 \lceil -\frac{1}{10} {}^{5t}\mathfrak{c} {}^{5t}\mathfrak{s} + \frac{1}{2} t \\ {}^{3t}\mathfrak{s}^3 \lceil \frac{1}{3} (2 - {}^t\mathfrak{s}^2) {}^t\mathfrak{c} : & \quad 6 {}^{2t}\mathfrak{s}^3 \lceil -{}^{2t}\mathfrak{c} (2 + {}^{2t}\mathfrak{s}^2) : & \quad {}^t\mathfrak{s}^4 \lceil -\frac{1}{8} (3 + 2{}^t\mathfrak{s}^2) {}^t\mathfrak{s} {}^t\mathfrak{c} + \frac{3}{8} t \\ {}^{3t}\mathfrak{s}^5 \lceil \frac{1}{45} (8 + 4{}^{3t}\mathfrak{s}^2 - 3{}^{3t}\mathfrak{s}^4) {}^{3t}\mathfrak{c} : & \quad {}^{3t}\mathfrak{s}^6 \lceil -\left(\frac{5}{48} + \frac{5}{72} {}^{3t}\mathfrak{s}^2 + \frac{1}{18} {}^{3t}\mathfrak{s}^4\right) {}^{3t}\mathfrak{s} {}^{3t}\mathfrak{c} + \frac{5}{16} t \\ \frac{3}{{}^{3t}\mathfrak{s}} \lceil {}^{3t/2}\mathfrak{t} \mathscr{X} : & \quad \frac{30}{{}^{30t}\mathfrak{s}} \lceil {}^{15t}\mathfrak{t} \mathscr{X} : & \quad \int {}^t\mathfrak{s}^{-1} \lceil \int \frac{1}{t/2} \frac{1}{{}^{t/2}\mathfrak{s}^{t/2}\mathfrak{c}} \\ \int {}^t\mathfrak{s}^{-2} \lceil -{}^t\mathfrak{g} : & \quad \frac{2}{{}^{2t}\mathfrak{s}^2} \lceil -{}^{2t}\mathfrak{g} : & \quad \frac{1}{{}^{4t}\mathfrak{s}^3} : & \quad \frac{4}{{}^{2t}\mathfrak{s}^3} \lceil -\frac{{}^{2t}\mathfrak{c}}{{}^{2t}\mathfrak{s}^2} + {}^t\mathfrak{t} \mathscr{X} \\ \frac{1}{{}^{2t}\mathfrak{s}^5} \lceil -\frac{1}{8} \frac{{}^{2t}\mathfrak{c}}{{}^{2t}\mathfrak{s}^4} - \frac{3}{16} \frac{{}^{2t}\mathfrak{c}}{{}^{2t}\mathfrak{s}^2} + \frac{3}{16} {}^t\mathfrak{t} \mathscr{X} \end{aligned}$$

$$\int_{dt} {}^t\mathfrak{c}^n = \frac{{}^{\mathfrak{c}}{}^{n-1}\mathfrak{s}}{n} + \frac{n-1}{n} \int_{dt} {}^t\mathfrak{c}^{n-2} \begin{cases} \int_{dt} {}^t\mathfrak{c}^{2m} = \frac{{}^{\mathfrak{c}}{}^{2m-1}\mathfrak{s}}{2m} + \frac{m-1/2}{m} \int_{dt} {}^t\mathfrak{c}^{2m-2} \\ \int_{dt} {}^t\mathfrak{c}^{2m+1} = \frac{{}^{\mathfrak{c}}{}^{2m}\mathfrak{s}}{2m+1} + \frac{m}{m+1/2} \int_{dt} {}^t\mathfrak{c}^{2m-1} \end{cases}$$

$${}^{4t}\mathfrak{c}^2 \lceil \frac{1}{8} {}^{4t}\mathfrak{c} {}^{4t}\mathfrak{s} + \frac{1}{2} t : \quad : {}^{2t}\mathfrak{c}^2 \lceil \frac{1}{4} {}^{2t}\mathfrak{c} {}^{2t}\mathfrak{s} + \frac{1}{2} t$$

$${}^{3t}\mathfrak{c}^3 \lceil \frac{1}{9} (2 + {}^{3t}\mathfrak{c}^2) {}^{3t}\mathfrak{s} : \quad {}^{2t}\mathfrak{c}^4 \lceil \frac{1}{16} (3 + 2{}^{2t}\mathfrak{c}^2) {}^{2t}\mathfrak{s} {}^{2t}\mathfrak{c} + \frac{3}{8} t$$

$$\begin{aligned}
{}^t \mathfrak{c}^5 \lceil \frac{1}{15} (8 + 4{}^t \mathfrak{c}^2 + 3{}^t \mathfrak{c}^4) {}^t \mathfrak{s}: & \quad {}^t \mathfrak{c}^6 \lceil \left(\frac{5}{16} + \frac{5}{24} {}^t \mathfrak{c}^2 + \frac{1}{6} {}^t \mathfrak{c}^4 \right) {}^t \mathfrak{s} {}^t \mathfrak{c} + \frac{5}{16} t \\
& \frac{2}{2t \mathfrak{c}} \lceil {}^{t + \pi/4} \mathfrak{t} \mathcal{X}: \quad \frac{7}{7t \mathfrak{c}} \lceil {}^{7t/2 + \pi/4} \mathfrak{t} \mathcal{X} \\
& \frac{3}{3t \mathfrak{c}^2} \lceil {}^{3t} \mathfrak{t}: \quad \int {}^t \mathfrak{c}^{-2} \lceil {}^t \mathfrak{t} \\
& \frac{2}{\mathfrak{c}^3} \lceil \frac{{}^t \mathfrak{s}}{{}^t \mathfrak{c}^2} + {}^{t/2 + \pi/4} \mathfrak{t} \mathcal{X}: \quad \frac{1}{t \mathfrak{c}^4} \lceil \frac{1}{3} \frac{{}^t \mathfrak{s}}{{}^t \mathfrak{c}^3} + \frac{2}{3} \frac{{}^t \mathfrak{s}}{{}^t \mathfrak{c}} \\
& {}^t \mathfrak{s}^4 + {}^t \mathfrak{c}^4 \lceil \frac{1}{4} ({}^t \mathfrak{c}^2 - {}^t \mathfrak{s}^2) {}^t \mathfrak{s} {}^t \mathfrak{c} + \frac{3}{4} \\
& {}^t \mathfrak{s}^6 + {}^t \mathfrak{c}^6 \lceil \frac{5}{24} ({}^t \mathfrak{c}^2 - {}^t \mathfrak{s}^2) {}^t \mathfrak{s} {}^t \mathfrak{c} + \frac{1}{6} ({}^t \mathfrak{c}^4 - {}^t \mathfrak{s}^4) {}^t \mathfrak{s} {}^t \mathfrak{c} + \frac{5}{8} t \\
& \int_{dt} {}^{3t} \mathfrak{t} \underset{u=3t}{=} \int_{du} {}^u \mathfrak{t} / 3 \models {}^{\sec u} \mathcal{X} / 3 = {}^{\sec 3t} \mathcal{X} / 3
\end{aligned}$$

$$\int_{dt} {}^t \mathfrak{t}^n = \frac{{}^t \mathfrak{t}^{n-1}}{n-1} - \int_{dt} {}^t \mathfrak{t}^{n-2} \begin{cases} \int_{dt} {}^t \mathfrak{t}^{2m} = \frac{{}^t \mathfrak{t}^{2m-1}}{2m-1} - \int_{dt} {}^t \mathfrak{t}^{2m-2} \\ \int_{dt} {}^t \mathfrak{t}^{2m+1} = \frac{{}^t \mathfrak{t}^{2m}}{2m} - \int_{dt} {}^t \mathfrak{t}^{2m-1} \end{cases}$$

$$\begin{aligned}
{}^{2t} \mathfrak{t}^2 \lceil \frac{1}{2} {}^{2t} \mathfrak{t} - t: & \quad {}^t \mathfrak{t}^3 \lceil \frac{1}{2} {}^t \mathfrak{t}^2 - \frac{1}{2} {}^1 {}^1 + {}^t \mathfrak{t}^2 \mathcal{X}: \quad {}^{5t} \mathfrak{t}^4 \lceil \frac{1}{15} {}^{5t} \mathfrak{t}^3 - \frac{1}{5} {}^{5t} \mathfrak{t} + t \\
& {}^t \mathfrak{g}^2 \lceil - {}^t \mathfrak{g} - t: \quad {}^t \mathfrak{g}^3 \lceil - \frac{1}{2} {}^t \mathfrak{g}^2 + \frac{1}{2} {}^1 {}^1 + {}^t \mathfrak{g}^2 \mathcal{X}: \quad {}^t \mathfrak{g}^4 \lceil {}^t \mathfrak{g} - \frac{1}{3} {}^t \mathfrak{g}^3 + t \\
& \text{power part int} \\
& \frac{t}{t \mathfrak{c}^2} \lceil t {}^t \mathfrak{t} + {}^t \mathfrak{c} \mathcal{X}
\end{aligned}$$

