$$\int {}^{x}\mathfrak{e} \lceil {}^{x}\mathfrak{e}$$

$$\int a^x \lceil \frac{a^x}{{}^{a}\cancel{\mathfrak{e}}}$$

$$\int_{dx}^{0|1} 2^{-x} = \frac{1}{2\ln 2}: \quad \int_{dx}^{0|\infty} e^{-x}$$

inner subst

$$\frac{{}^{1/x}\mathfrak{e}}{x^2}$$

$$\int_{dx}^{1|4} {}^{x^{1/2}}\mathfrak{e}\, x^{-1/2}$$

outer subst

$$y = {}^{x}\mathfrak{e} \implies dy = ydx$$

$${}^{x}\mathfrak{e}\sqrt{1 + {}^{x}\mathfrak{e}} \lceil \frac{2}{3}\left(1 + {}^{x}\mathfrak{e}\right)^{3/2}$$

$$\frac{5}{{}^{x}\mathfrak{e} + 5} \lceil \frac{{}^{x}\mathfrak{e}}{{}^{x}\mathfrak{e} + 5}\cancel{\mathfrak{e}}$$

$$\frac{1}{{}^{x}\mathfrak{e} + {}^{-x}\mathfrak{e}} \lceil {}^{{}^{x}\mathfrak{e}}\cancel{\mathfrak{t}}: \quad \frac{2}{{}^{2x}\mathfrak{e} + {}^{-2x}\mathfrak{e}} \lceil {}^{{}^{2x}\mathfrak{e}}\cancel{\mathfrak{t}}: \quad \frac{{}^{x}\mathfrak{e}}{{}^{2x}\mathfrak{e} + {}^{x}\mathfrak{e} + 1} \lceil \frac{2}{\sqrt{3}} {}^{(1 + 2^{x}\mathfrak{e})/\sqrt{3}}\cancel{\mathfrak{t}}$$

$$\frac{2}{\sqrt{{}^{2x}\mathfrak{e} - {}^{x}\mathfrak{e} + 1}} \lceil {}^{\frac{2\sqrt{{}^{2x}\mathfrak{e} - {}^{x}\mathfrak{e} + 1} + \mathfrak{e}^{x} - 2}{2\sqrt{{}^{2x}\mathfrak{e} - {}^{x}\mathfrak{e} + 1} - \mathfrak{e}^{x} + 2}}\cancel{\mathfrak{e}}: \quad \frac{2\sqrt{7}}{\sqrt{7 - 3^{2x}\mathfrak{e}}} \lceil {}^{\frac{\sqrt{7} - \sqrt{7 - 3^{2x}\mathfrak{e}}}{\sqrt{7} + \sqrt{7 - 3^{2x}\mathfrak{e}}}}\cancel{\mathfrak{e}}$$

$$\frac{\sqrt{{}^{-x}\mathfrak{e} + 1}}{{}^{x}\mathfrak{e}} \lceil -\frac{2}{3}\left({}^{-x}\mathfrak{e} + 1\right)^{3/2}$$

$$\frac{{}^{x}\mathfrak{e}}{1 + {}^{2x}\mathfrak{e}} \lceil {}^{{}^{x}\mathfrak{e}}\cancel{\mathfrak{t}}$$

$${}^{\sqrt{x}}\mathfrak{e}$$

part int

$$\begin{cases} x{}^{x}\mathfrak{e} = x{}^{x}\mathfrak{e} - {}^{x}\mathfrak{e} \\ x\underbrace{{}^{-3x}\mathfrak{e}}_{=g'} = x\frac{{}^{-3x}\mathfrak{e}}{-3} - \frac{{}^{-3x}\mathfrak{e}}{-3} \models \frac{x{}^{-3x}\mathfrak{e}}{-3} - \frac{{}^{-3x}\mathfrak{e}}{9} \end{cases}$$

$$\int_{dx}^{1|\infty} x \underbrace{e^{-x}}_{=g'} = x\frac{e^{-x}}{-1} - \int_{dx}^{1|\infty} \frac{e^{-x}}{-1} = \begin{cases} -xe^{-x} - e^{-x} \\ 1|\infty \end{cases} = -\left(-\frac{1}{e} - \frac{1}{e}\right) = \frac{2}{e}: \quad \int_{dx}^{1|\infty} x^{\,-2x}\mathfrak{e}$$

$$x^{2\ 3x}\mathfrak{e} \lceil {}^{3x}\mathfrak{e} \left(\frac{1}{3}x^2 - \frac{2}{9}x + \frac{2}{27}\right): \quad x^{5\ x}\mathfrak{e} \lceil {}^{x}\mathfrak{e} \left(x^5 - 5x^4 + 20x^3 - 60x^2 + 120x - 120\right)$$

$$\left(2 - x^2\right)\ {}^{3x}\mathfrak{e} \lceil {}^{3x}\mathfrak{e} \left(\frac{16}{27} + \frac{2}{9}x - \frac{1}{3}x^2\right)$$

$$x^{\,1\,-\,x}\mathfrak{e} \lceil -\,(x+1)\ {}^{1\,-\,x}\mathfrak{e}: \quad x^{3\ -x^2}\mathfrak{e} \lceil -\frac{x^2+1}{2}\,{}^{-x^2}\mathfrak{e}$$

$$3^x\ (x+2) \lceil 3^x \left(\frac{x+2}{{}^3\not\mathfrak{e}} - {}^3\not\mathfrak{e}^2\right): \quad x\,2^x \lceil 2^x \left(\frac{x}{{}^2\not\mathfrak{e}} - \frac{1}{{}^2\not\mathfrak{e}^2}\right)$$