$y = \frac{e^{4x}}{e^{4x}+3}$

$e^{4x}+3$

$u = e^{4x} \quad v = e^{4x}+3$

$u' = 4e^{4x} \quad v' = 4e^{4x}$

$\frac{(e^{4x})(e^{4x}+3) - (4e^{4x})(e^{4x})}{(e^{4x}+3)^2}$

$\frac{12e^{4x}}{(e^{4x}+3)^2}$

$\ln(x\sqrt{x^2-2})$

$\frac{2x^2-2}{\sqrt{x^2-2}}$

$\frac{1}{x\sqrt{x^2-2}} \left(\frac{2x^2-1}{x^2-2}\right) \quad \frac{2x^2-1}{x(x^2-2)}$

(20) 6480

$(3(20)+14)$

10 = 1680

$(3(10)+14)^2$

8