

- 1) α) $f(x) = \frac{(\eta\mu x + 2)'}{\eta\mu x + 2} \Rightarrow F(x) = \ln(\eta\mu x + 2) + c$
- β) $f(x) = \frac{1}{2} \cdot \frac{2x}{x^2 + 4} \Rightarrow f(x) = \frac{1}{2} \cdot \frac{(x^2 + 4)'}{x^2 + 4} \Rightarrow F(x) = \frac{1}{2} \ln(x^2 + 4) + c$
- γ) $f(x) = \frac{\eta\mu x}{\sigma\upsilon\nu x} \Rightarrow f(x) = -\frac{(\eta\mu x)'}{\sigma\upsilon\nu x} \Rightarrow f(x) = -\frac{(\sigma\upsilon\nu x)'}{\sigma\upsilon\nu x} \Rightarrow F(x) = -\ln|\sigma\upsilon\nu x| + c$
- 2) $f(x) = \frac{3}{2} \cdot \frac{2x}{x^2 + 1} \Rightarrow f(x) = \frac{3}{2} \cdot \frac{(x^2 + 1)'}{x^2 + 1} \Rightarrow F(x) = \frac{3}{2} \ln(x^2 + 1) + c$
- 3) $f(x) = \frac{(x^2 + x + 1)'}{x^2 + x + 1} \Rightarrow F(x) = \ln(x^2 + x + 1) + c$
- 4) $f(x) = \frac{1}{2} \cdot \frac{6x - 2}{3x^2 - 2x + 51} \Rightarrow f(x) = \frac{1}{2} \cdot \frac{(3x^2 - 2x + 51)'}{3x^2 - 2x + 51} \Rightarrow F(x) = \frac{1}{2} \ln|3x^2 - 2x + 51| + c$
- 5) $f(x) = \frac{(e^x + 5)'}{e^x + 5} \Rightarrow F(x) = \ln(e^x + 5) + c$
- 6) $f(x) = \frac{(e^x + 1)'}{e^x + 1} \Rightarrow F(x) = \ln(e^x + 1) + c$
- 7) $f(x) = -\frac{e^x}{1 - e^x} \Rightarrow f(x) = -\frac{(1 - e^x)'}{1 - e^x} \Rightarrow F(x) = -\ln|1 - e^x| + c$
- 8) $f(x) = \frac{1}{2} \cdot \frac{2\sigma\upsilon\nu x}{1 + 2\eta\mu x} \Rightarrow f(x) = \frac{1}{2} \cdot \frac{(1 + 2\eta\mu x)'}{1 + 2\eta\mu x} \Rightarrow F(x) = \frac{1}{2} \ln|1 + 2\eta\mu x| + c$
- 9) $f(x) = \frac{\sigma\upsilon\nu x}{\eta\mu x} \Rightarrow f(x) = \frac{(\eta\mu x)'}{\eta\mu x} \Rightarrow F(x) = \ln|\eta\mu x| + c$
- 10) $f(x) = \frac{\sigma\upsilon\nu 2x}{\eta\mu 2x} \Rightarrow f(x) = \frac{1}{2} \cdot \frac{2\sigma\upsilon\nu 2x}{\eta\mu 2x} \Rightarrow f(x) = \frac{1}{2} \cdot \frac{(\eta\mu 2x)'}{\eta\mu 2x} \Rightarrow F(x) = \frac{1}{2} \ln|\eta\mu 2x| + c$
- 11) $f(x) = \frac{\eta\mu \frac{x}{2}}{\sigma\upsilon\nu \frac{x}{2}} \Rightarrow f(x) = -2 \cdot \frac{-\frac{1}{2} \eta\mu \frac{x}{2}}{\sigma\upsilon\nu \frac{x}{2}} \Rightarrow f(x) = -2 \cdot \frac{\left(\sigma\upsilon\nu \frac{x}{2}\right)'}{\sigma\upsilon\nu \frac{x}{2}} \Rightarrow F(x) = -2 \ln\left|\sigma\upsilon\nu \frac{x}{2}\right| + c$
- 12) $f(x) = -\frac{2\eta\mu x \sigma\upsilon\nu x}{1 + \sigma\upsilon\nu^2 x} \Rightarrow f(x) = -\frac{(1 + \sigma\upsilon\nu^2 x)'}{1 + \sigma\upsilon\nu^2 x} \Rightarrow F(x) = -\ln(1 + \sigma\upsilon\nu^2 x) + c$
- 13) $f(x) = \frac{(x^2 + \eta\mu x + 1)'}{x^2 + \eta\mu x + 1} \Rightarrow F(x) = \ln(x^2 + \eta\mu x + 1) + c$
- 14) $f(x) = \frac{x^{e-1} + e^{x-1}}{x^e + e^x} \Rightarrow f(x) = \frac{1}{e} \frac{ex^{e-1} + e^x}{x^e + e^x} \Rightarrow f(x) = \frac{1}{e} \cdot \frac{(x^e + e^x)'}{x^e + e^x} \Rightarrow F(x) = \frac{1}{e} \ln(x^e + e^x) + c$

$$\mathbf{15)} \quad f(x) = \frac{(e^x + e^{-x})'}{e^x + e^{-x}} \quad \Rightarrow \quad F(x) = \ln(e^x + e^{-x}) + c$$