

iii cont.) $\int \frac{3}{2x+1} + \frac{-1}{x+4} dx$

$$= 3 \ln(2x+1) - \ln(x+4)$$

$$= \ln(2x+1)^3 - \ln(x+4)$$

$$= \ln \frac{(2x+1)^3}{(x+4)}$$

b) $\int \frac{4}{x(1+4\ln x)^2} dx$

$$= 4 \ln(x(1+4\ln x)^2)$$

c) 1) $\int_{\ln 2}^{\ln 3} \frac{3e^{2x}}{\sqrt{e^x-1}} dx \rightarrow \int_{\ln 2}^{\ln 3} 3e^{2x} (\sqrt{e^x-1})^{-1}$

$$u = 3e^{2x} \quad \frac{du}{dx} = (\sqrt{e^x-1})^{-1}$$

$$\frac{du}{dx} = 6e^{2x} \quad v = \ln(\sqrt{e^x-1})$$

$$3e^{2x} \cdot \ln(\sqrt{e^x-1}) - \int 6e^{2x} \cdot \ln(\sqrt{e^x-1})$$