

p 367 # 67-81 odd, skip # 77

$$\begin{aligned} 67) \quad u &= 5-3x \\ &-\frac{1}{3} \int \frac{1}{u} du \\ &-\frac{1}{3} \ln|5-3x| + C \end{aligned}$$

$$\begin{aligned} 68) \quad u &= \ln x \\ &\int u^2 du \\ &\frac{1}{3} (\ln x)^3 + C \end{aligned}$$

$$\begin{aligned} 71) \quad u &= 1+e^x \\ &\int u^{1/2} du \\ &\frac{2}{3} (1+e^x)^{3/2} + C \end{aligned}$$

$$\begin{aligned} 73) \quad u &= \ln x \\ &\int \frac{1}{u} du \\ &\ln|\ln x| + C \end{aligned}$$

$$\begin{aligned} 75) \quad &\int \frac{\cos x}{\sin x} dx \\ u &= \sin x \\ &\ln|\sin x| + C \end{aligned}$$

$$\begin{aligned} 79) \quad u &= 1/x \\ &-\int e^{1/x} du \\ &-\left[e^{1/x} \right] \end{aligned}$$

$$\begin{aligned} 81) \quad u &= \ln x \\ &\int_1^4 u^{-1/2} du \end{aligned}$$

$$2u^{1/2} \Big|_1^4$$

$$2\sqrt{4} - 2\sqrt{1}$$

$$4 - 2 = 2$$

$$\begin{aligned} &-(e^{1/2} - e) \\ &e - \sqrt{e} \end{aligned}$$