Rubi 3 Test Suite Results

Indefinite Integration Problems Involving Logarithms

Unable to integrate:

$$\left\{\frac{1}{x \operatorname{Log}[e^x]}, x, -1, 0\right\}$$

$$\frac{-\operatorname{Log}[x] + \operatorname{Log}[\operatorname{Log}[e^x]]}{x - \operatorname{Log}[e^x]}$$

$$\operatorname{Int}\left[\frac{1}{x \operatorname{Log}[e^x]}, x\right]$$

Unable to integrate:

$$\left\{\frac{\operatorname{Cot}[x]}{\operatorname{Log}\left[e^{\operatorname{Sin}[x]}\right]}, x, -1, 1\right\}$$

$$\frac{\operatorname{Log}\left[\operatorname{Log}\left[e^{\operatorname{Sin}[x]}\right]\right] - \operatorname{Log}[\operatorname{Sin}[x]]}{-\operatorname{Log}\left[e^{\operatorname{Sin}[x]}\right] + \operatorname{Sin}[x]}$$

$$\operatorname{Subst}\left[\operatorname{Int}\left[\frac{1}{x \operatorname{Log}[e^x]}, x\right], x, \operatorname{Sin}[x]\right]$$

Valid but unnecessarily complicated antiderivative:

$$\left\{\frac{-1 + \operatorname{Log}[3x]^2}{x + x \operatorname{Log}[3x]^3}, x, -10, 10\right\}$$

$$\frac{\operatorname{ArcTan}\left[\frac{1-2\operatorname{Log}[3x]}{\sqrt{3}}\right]}{\sqrt{3}} + \frac{1}{2}\operatorname{Log}\left[1 - \operatorname{Log}[3x] + \operatorname{Log}[3x]^2\right]$$

$$\frac{\operatorname{ArcTan}\left[\frac{1-2\operatorname{Log}[3x]}{\sqrt{3}}\right]}{\sqrt{3}} - \frac{1}{3}\operatorname{Log}[1 + \operatorname{Log}[3x]] + \frac{1}{6}\operatorname{Log}\left[1 - \operatorname{Log}[3x] + \operatorname{Log}[3x]^2\right] + \frac{1}{3}\operatorname{Log}\left[1 + \operatorname{Log}[3x]^3\right]$$