17

$\int_0^4 (1+e^x)\,dx \quad n=8$

$\Delta x = \frac{4-0}{8} = \frac{1}{2}$

$T_n = \frac{1}{2}[(0.69)+2(0.974)+2(1.31)+2(1.70)+2(2.12)$
$+2(2.57)+(4.078) = 8.81427$

$M_8 = \frac{1}{8}[(0.86)+(1.136)+(1.50)+(1.91)+(2.35)+(2.51)+$
$(3.288)+(3.77) = 8.83475$

$S_n = \frac{1}{24}[(0.693)+2(1.31)+4(1.709)+2(2.120)+4(2.57)+$
$4(0.4132) = 8.8042$

5.3

13

$\ln(x) = \int_1^{1x} \ln t\,dt \quad t = x \quad \frac{1}{t} = \frac{1}{x}$

29

$\int_1^4 \frac{2+x^2}{\sqrt{x}}\,dx \to \int_1^4 \frac{2+x^2}{x^{\frac{1}{2}}}\,dx \to \int_1^4 \frac{2}{x^{\frac{1}{2}}}\,dx + \int_1^4 \frac{x^2}{x^{\frac{1}{2}}} \to \int_1^4 \frac{2}{x^{\frac{1}{2}}} + \int_1^4 x^{\frac{3}{2}}$

$\frac{4\sqrt{x}}{5} + \frac{2x^2\sqrt{x}}{5} \to \frac{104}{5} - \frac{22}{5} = \frac{82}{5}$

31

$\int_{\pi/6}^{\pi/2} \csc + \cot\,dt = -\csc(x) \int_{\frac{\pi}{6}}^{\frac{\pi}{2}} \to [-1-(-2)] = 1$

33

$\int_0^1 (1+r)^3\,dr \to \left[\frac{v^4}{4}\right] \to 4 = 1+r$