5.6:12

Evaluera $I = \int \frac{(\ln t)}{t} dt$

Lösning

Låt $u = \ln t \Rightarrow du = \frac{dt}{t}$

$$I = \int u\, du = \frac{1}{2} u^2 + C$$

$$= \frac{(\ln t)^2}{2} + C$$

Kontroll $\frac{d}{dt}\left(\frac{(\ln t)^2}{2} + C\right)$

$= \ln t \cdot \frac{1}{t}$ ok