

Logarithms – Exercises (1 page ; 1/2/26)

Show that $\ln(x - \sqrt{x^2 - 1}) = -\ln(x + \sqrt{x^2 - 1})$

If $k = \log_{24} 12$, write the following in terms of k :

(a) $\log_{24} 2$ (b) $\log_{24} 6$

Prove that $\log_b c = \frac{\log_a c}{\log_a b}$

Prove that $\int \frac{1}{x} dx = \ln|x|$ for all $x \neq 0$,

assuming that $\int \frac{1}{x} dx = \ln x$ for $x > 0$

Write $\log_2 3$ in terms of logs to the base 10