

Tough Nut to Crack – Integration Problem V:

To be submitted by midday Monday 15th February 2010.

Problem

Show that

$$\int \frac{dx}{\sqrt{x}-1} = 2 \left[\sqrt{x} + \ln |\sqrt{x}-1| \right] + C$$

There is **no reward** for differentiating the Right Hand Side and showing that it is equal to the integrand on the Left Hand Side.

This problem was a contribution by Thomas Cheung.

Prize

A book on mathematical techniques.