

MATH 2
PROBLEM OF THE WEEK 1
Due Friday, January 31st, 2003 before the quiz.

Please show all your work!

Name: _____

Show the following:

(1)

$$\int \frac{(\ln x)^n}{x} dx = \frac{(\ln x)^{n+1}}{n+1} + c$$

(2)

$$\int (\ln x)^n dx = x(\ln x)^n - n \int (\ln x)^{n-1} dx$$