PRINT Your Name:_____

Quiz – January 20, 2004

Find $\int \frac{2\ln x}{x} dx$. Check your answer.

Answer: Let $u = \ln x$. It follows that $du = \frac{dx}{x}$. The original problem is equal to

$$\int 2u du = 2\frac{u^2}{2} + C = \boxed{(\ln x)^2 + C.}$$

Check: The derivative of the proposed answer is $2(\ln x)\frac{1}{x}$ ✓ .