PRINT Your Name:_____

**Quiz – August 24, 2004**

Find $\frac{dz}{dx}$ for $z = x^2 \ln x^2 + (\ln x)^3$ .

**Answer:**

$$\frac{dz}{dx} = x^2 \frac{2}{x} + 2x \ln x^2 + 3 (\ln x)^2 \frac{1}{x}.$$