CALCULUS
Derivatives of logarithmic functions
NEW

0390-1. NEW Differentiate $f(x) = \ln(|x^7 + \pi x^4|)$.

0390-2. NEW Differentiate $y = \log_\pi(|x^4 - ex + \sqrt{2}|)$.

0390-3. NEW Differentiate $g(x) = 1 + [\sec(\ln x)]$.

0390-4. NEW Differentiate $h(x) = e^{\pi(\ln x)}$.

0390-5. NEW Differentiate $\alpha(x) = \ln\left(4e^2 + 3e - 1\right)$.

0390-6. NEW Differentiate $Q(s) = (\ln s)^{4/5}$.

0390-7. NEW Differentiate

$$q = \ln\left(\left|\frac{(x^2 - 3x + 4)^6(2x + 1)^8}{(x^8 - 4)^9(x + 7)^4(e^{5x})}\right|\right).$$

NEW 0390-8. Differentiate

$$F(u) = \ln\left(\left|u^6 e^{3u} - u^3 e^{3u} + 4u^2 e^{3u} - \pi e^{3u}\right|\right).$$

NEW 0390-9. Differentiate $u = 4t^7 \log_{\sqrt{2}}\left(\sqrt[4]{t}\right)$.

NEW 0390-10. Let $f(x) = \left[x^8\right]\left[\ln(x^2 + 2x - 5)\right]$.

Find $f'(x)$ and $f''(x)$.