

Q1. Find slope of the curve $\sin(xy) + \pi^{10} = (x + (1 - \sin \frac{x}{2})^5)^{10}$ at the point $(\pi, 1)$. **{Implicit Diff}**

Q2. Let $y = (\sec^{-1} x)^{x^3}$. Find $\frac{dy}{dx}$ **{Ln type Diff}**

Q3. Let $w = \frac{(\tan 2x)(x^2 + 1) \log_5(x)}{(\tan^{-1} x)e^{x^2}}$. Find $\frac{dw}{dx}$. **{Ln Diff}** (use other side of the page for solution)

ID # _____ Name _____ Quiz4

*MATH 101

Section: _____

Serial # _____

Q1. Let $y + \csc(xy) = (1 + \cos^{-1}(2x))^{10}$. Find $\frac{dy}{dx}$.

{Implicit Diff}

Q2. Let $z = (2x+1)^{\cot^{-1}x}$. Find $\frac{dz}{dx}$

{Ln type Diff}

Q3. Find slope of the curve $y = \frac{xe^{x^2}(x+1)}{\cos(\pi x)\ln(ex)}$ at the point $(1, -2e)$.

{Ln Diff}

(use other side of the page for solution)

Q1. Let $w = (x \cot^{-1} x)^{1/x}$. Find $\frac{dw}{dx}$

Q2. Find slope of the curve $\cos\left(\frac{xy}{2}\right) + \pi^y = (x + (1 - \sin\frac{x}{2})^5)^5$ at the point $(\pi, 1)$.

Q3. Let $M = \frac{(\cot^2 2x)\sqrt{x^3 + 5} e^{2x^3}}{(\csc^{-1} x)\log_7(x)}$. Find $\frac{dM}{dx}$.

(Use other side of the page for solution)