Name: _____

Quiz 11 ♡

MATH 200
October 10, 2022

1. If $y = \ln\left|x^5 - x^2 + 3x + 1\right|$, then $\dfrac{dy}{dx} =$

2. $\dfrac{d}{dx}\Big[\,\big(\cos(x) + \ln\big(5x+1\big)\,\big)^3\Big] =$

3. $D_u\Big[\,e^{u+\ln|\sin(u)|}\Big] =$

4. Find all x for which the tangent line to $f(x) = x\ln(x) - 5x$ is horizontal at $\big(x, f(x)\big)$.

Name: _____ Quiz 11 ♣ MATH 200
October 10, 2022

1. If $y = \ln\left|\sqrt{x} + x\right|$, then $\dfrac{dy}{dx} =$

2. $\dfrac{d}{dw}\Big[\,\big(e^w + \ln(w)\big)^5\Big] =$

3. $D_x\Big[\,x^4 \ln\left|x^3 + x^2 + x\right|\,\Big] =$

4. Find all x for which the tangent line to $f(x) = 3x + x\ln(x)$ is horizontal at $\big(x, f(x)\big)$.

Name: _____

Quiz 11 ♢

MATH 200
October 10, 2022

1. If $u = \ln\left|4e^w - w\right|$, then $\dfrac{du}{dw} =$

2. $\dfrac{d}{dx}\Big[\big(\ln(x) + x\big)^2\Big] =$

3. $D_x\left[\dfrac{1 + \ln|x|}{1 - \ln|x|}\right] =$

4. Find all x for which the tangent line to $f(x) = x + \ln\left(x^2 + 1\right)$ is horizontal at $\big(x, f(x)\big)$.

Name: _____

Quiz 11 ♠

MATH 200
October 10, 2022

1. If $y = \ln\left|x^3 + \tan(x)\right|$, then $\dfrac{dy}{dx} =$

2. $\dfrac{d}{dx}\Big[\,\big(\ln\left|x + \sin(x)\right|\big)^2\,\Big] =$

3. $D_w\Big[\cos\big(\ln|w^2 e^w|\big)\Big] =$

4. Find all x for which the tangent line to $f(x) = \dfrac{x}{2} + \ln\left(2x^2 + 8\right)$ is horizontal at $\big(x, f(x)\big)$.