Name: _____

Quiz 12 ♡

MATH 200
October 17, 2022

1. Find the derivative: $y = \sin^{-1}\left(x^5 - 3x^2\right)$

2. Find the derivative: $y = \left(\tan^{-1}(x)\right)^5$

3. Find the derivative: $y = \dfrac{\sec^{-1}(x)}{e^x}$

4. Suppose $f(x)$ is the number of liters of fuel in a rocket when it is x miles above the Earth's surface. Explain in simple terms the meaning of the statement $f'(20) = -8$.

Name: _____

Quiz 12 ♣

MATH 200
October 17, 2022

1. Find the derivative: $y = \tan^{-1}\left(x^5 - 3x^2\right)$

2. Find the derivative: $y = \left(\sin^{-1}(x)\right)^5$

3. Find the derivative: $y = \ln(x)\sec^{-1}(x)$

4. Suppose $f(x)$ is the number of liters of fuel in a rocket when it is x miles above the Earth's surface. Explain in simple terms the meaning of the statement $f'(20) = -8$.

Name: _____

Quiz 12 ♢

MATH 200
October 17, 2022

1. Find the derivative: $y = \sec^{-1}\left(x^5 - 3x^2\right)$

2. Find the derivative: $y = \left(\sin^{-1}(x)\right)^5$

3. Find the derivative: $y = e^{5x}\tan^{-1}(x)$

4. Consider the function $h(x)$, where $h(x)$ equals the elevation (in feet above sea level) x miles due west of your present location. Suppose $h'(75) = 5$. Explain what this means.

Name: _____

Quiz 12 ♠

MATH 200
October 17, 2022

1. Find the derivative: $y = \sin^{-1}\left(x^5 - 3x^2\right)$

2. Find the derivative: $y = 3\left(\tan^{-1}(x)\right)^4$

3. Find the derivative: $y = \sec(x)\sec^{-1}(x)$

4. Consider the function $h(x)$, where $h(x)$ equals the elevation (in feet above sea level) x miles due west of your present location. Suppose $h'(75) = 5$. Explain what this means.