

Name: _____

QUIZ 12 

MATH 200
March 1, 2022


1. Differentiate: $\sec^{-1}(x) \ln(x)$

2. Differentiate: $\sin^{-1}(x \ln(x))$

3. Find all x for which the tangent line to $f(x) = \tan^{-1}(x)$ at $(x, f(x))$ has slope $m = \frac{1}{10}$.

4. An object moving on a line is $s(t) = t^3 - 3t^2$ meters from its starting point at time t seconds. Find the object's acceleration when its velocity is -3 meters per second.

Name: _____

QUIZ 12 

MATH 200
March 1, 2022

1. Differentiate: $x^5 \tan^{-1}(x)$

2. Differentiate: $\sec^{-1}(x \ln(x))$

3. Find all x for which the tangent line to $f(x) = \sin^{-1}(x)$ at $(x, f(x))$ has slope $m = 1$.

4. An object moving on a line is $s(t) = t^3 - 3t^2$ meters from its starting point at time t seconds.
Find the object's velocity at the instant its acceleration is 6 meters per second per second.