MAC 2311 Hybrid Calculus I (B)

Name Quiz #4 (3.2-3.4) Take Home. Show all work.

1. Find the derivative of$ g(t)$. Simplify before taking the derivative. Use the Power Rule Only. Do not use the product or quotient rules.

$g(t)=\frac{t^{3/2}-\sqrt{t}}{\sqrt{t}}$.

 Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Find the equation of the slope of the tangent line to the graph of $y=\frac{x^{2}+1}{x^{2}-1}$ .

 Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 3. Given$ f\left(x\right)=x^{2}\sin(\left(x\right) cos⁡(x)),$ find$ f'\left(x\right)$.

Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. Find$ \lim\_{x\to 0}\frac{Sin(2x)}{x}$. Show all your work for credit.

 Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_