MAC 2311 Hybrid Calculus I (B)

Name Quiz #5 (3.5-3.6, Exp**)** Take-Home. Show all work.

1. Find the derivative of$ g(x)=\sqrt{x^{2}+e^{x^{2}}} $.

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

2. Find the derivative of$ f(x)=\frac{e^{2x}}{2^{x}}$.

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

3. Find the velocity and acceleration of the position function $s\left(t\right)=\frac{t}{t^{2}-1}$ at$ t=0$.

Answers: v(0)=\_\_\_\_\_\_\_\_\_\_\_\_\_\_; a(0)=\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. Find the derivative of$ f(x)=(sec^{2}\left(x\right)+tan^{2}\left(x\right))^{2}$.

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