Math 135, Calculus 1, Fall 2020

Weekly Quiz 09-23

Show all work: clearly indicate your answer and the reasoning used to arrive at the answer. Unsupported answers may not receive full credit.

Question 1 (6 points). Consider the function

$$f(x) = \begin{cases} 6x^2 & \text{if } x < 0 \\ -7x - 1 & \text{if } x \geq 0 \end{cases}$$

(a) Show that $f(x)$ is one-to-one.

(b) Determine the inverse function $f^{-1}(x)$.

Question 2. Compute the slope of the secant line over the interval $[-1, 3]$ of the function $g(x)$ with the following graph.