King Fahd University of Petroleum and Minerals
Department of Mathematics and Statistics
Math 101 (151) Sec 07 - Quiz 6

Name: ID: Serial No.:

1. If $f(1) = 10$ and $f'(x) \geq 2$ for $1 \leq x \leq 4$, how small $f(4)$ possibly be?

2. Let $G(x) = 5x^{2/3} - 2x^{5/3}$

   (a) Find the intervals of increse and decrease.

   (b) Find the local maximum and minimum values.

   (c) Find the intervals of concavity and inflection ppints.

3. Find $\lim_{x \to 1^+} [\ln(x^7 - 1) - \ln(x^5 - 1)]$

4. Find an equation of the slant asymptote of $f(x) = \dfrac{2x^3 + x^2 + x + 3}{x^2 + 2x}$