

Math 101-171-Sec.49

Quiz #5

Name:

ID:

SR:

Question1: Find the absolute maximum and minimum of $f(x) = x^3 - 6x^2 + 5$, where x in $[-3, 5]$.

Question2: Let $f(x) = x^3 - 2x^2 - 4x + 2$ where x in $[-2, 2]$. Show that the function satisfies the Mean value theorem and find the value of c

Question3. Let of $f(x) = \cos^2(x) - 2\sin x$, $0 \leq x \leq 2\pi$

- a. Find the intervals on which of $f(x)$ is increasing and decreasing
- b. Find the local maximum and minimum values of $f(x)$.
- c. Find the intervals of concavity and the inflection points.
- d. Use the information from (a) to (c) to sketch the graph of $f(x)$