Math101 Name:

Quiz#4 ID No:

Serial No:

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1- Does this function $f(x) = \begin{cases} 2x - 3 \\ 6x - x^2 - 7 \end{cases}$ satisfy the hypotheses of the Mean Value Theorem? If yes find the value of c that satisfies the conclusion of the theorem.

2- If $f(x) = \csc^2 x - 2\cot x$, $0 < x < \pi$. Find the local extrema of $f(x)$, the absolute extrema if any , and where they occur?

Mat-h101 Name:

Quiz#4 ID No:

Serial No:

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1- Does this function $f(x) = \begin{cases} 2x-3, & 0 \le x \le 2 \\ 6x - x^2 - 7, & 2 < x \le 3 \end{cases}$ satisfy the hypotheses of the Mean Value Theorem? If yes find the value of c that satisfies the conclusion of the theorem.

2- If $f(x) = \sec^2 x - 2\tan x$, $\frac{-\pi}{2} < x < \frac{\pi}{2}$ Find the local extrema of $f(x)$, the absolute extrema if any , and where they occur?