KFUPM | Term 101 | Date: 2/1/2011

Mathematics & Statistics | MATH 101 | Duration: 20 minutes

Quiz# 6

Name: ID #: Section 19 Serial #:

1. Does $f(x)=\begin{cases} 2x-3, & 0\le x\le 2 \\ 6x-x^2-7, & 2<x\le 3 \end{cases}$ satisfy the Mean Value Theorem? Explain.

2. Find the extrema and inflection numbers (if any!) for $f(x)=\frac{1}{4}x^4-\frac{5}{3}x^3+4x^2-40x+57$.

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Quiz# 6

Name: ID #: Section 33 Serial #:

1. Find the extrema (if any!) of $f(x) = x^2(2x-5)^{1/3}$.

2. Show that the function $f(x) = \frac{1}{1-x} + \sqrt{1+x} - \frac{4}{3}$ has exactly one real root in [-1 , 2].

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Quiz# 6

Name: ID #: Section 36 Serial #:

1. If $f(x)=\begin{cases}\dfrac{\sin x}{x}, & -\pi \le x < 0 \\ 0, & x = 0\end{cases}$ Can you find a number k such that $k \cos k - \sin k = 0$? Explain.

2. Find the extrema and inflection numbers (if any!) for $f(x)=\left|\dfrac{x^2}{4}-2\right|$.

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