Name: _____ MATH 200 – Quiz 10

Instructions: Show work and put a box around your final answer. March 27, 2013

1. This problem concerns the function $f(x) = e^{x^3 - 12x}$.

   (a) Find the critical points of $f(x)$.

   (b) Find the intervals on which $f(x)$ increases, and those on which it decreases.

   (c) Find the locations (x-coordinates) of the local maxima, if any. Find the locations of the local minima, if any.

Name: _____ MATH 200 – Quiz 10

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1. This problem concerns the function $f(x) = 3x^4 + 4x^3 - 12x^2 + 2$.

   (a) Find the critical points of $f(x)$.

   (b) Find the intervals on which $f(x)$ increases, and those on which it decreases.

   (c) Find the locations (x-coordinates) of the local maxima, if any. Find the locations of the local minima, if any.

Name: _____ MATH 200 – Quiz 10

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1. This problem concerns the function $f(x) = \frac{3}{2}x^4 - x^6$.

   (a) Find the critical points of $f(x)$.

   (b) Find the intervals on which $f(x)$ increases, and those on which it decreases.

   (c) Find the locations (x-coordinates) of the local maxima, if any. Find the locations of the local minima if any.

Name: _____ MATH 200 – Quiz 10

Instructions: Show work and put a box around your final answer. March 27, 2013

1. This problem concerns the function $f(x) = x^2e^x$.

   (a) Find the critical points of $f(x)$.

   (b) Find the intervals on which $f(x)$ increases, and those on which it decreases.

   (c) Find the locations (x-coordinates) of the local maxima, if any. Find the locations of the local minima, if any.