

Pledge:

11/18/2005
Dr. Lunsford

MATH261 Calculus I
Quiz 14 – The Last Quiz!

Name: _____
(20 Points Total)

I. Use the function $f(x) = x^3 - 6x^2 + 9x + 2$ to answer the following questions. (4 points each, 12 points total)

(a) Find the absolute maximum and absolute minimum of f on the interval $[-1, 2]$. Clearly indicate the extreme values and where they occur. (4 points)

(b) Find all intervals on the real line on which f is increasing. (4 points)

(c) Find all intervals on the real line on which f is concave down. (4 points)

II. Two cars start moving from the same point. One travels south at 60 mi/h and the other travels west at 25 mi/h. At what rate is the distance between the cars increasing two hours later? Clearly and neatly show all work. Clearly indicate what all variables used represent. Use the back of the page if necessary. (8 points)