ESP Quiz 6 (Kouba)

Please PRINT your name here : _____

This quiz is due next Tuesday at the beginning of ESP.

1.) (15 pts.) Determine if the following function and interval satisfy the assumptions of the Mean Value Theorem (MVT). If so, find all values of c guaranteed by the MVT.

$f(x) = x + \sqrt{x}$ for x in $[0, 9]$

2.) (15 pts.) Solve $f'(x) = 0$ and $f''(x) = 0$ for x and set up a sign chart for f' and f''. :

$f(x) = \dfrac{x}{\sqrt{x-4}}$.

3.) (15 pts.) State the domain for the following function. Determine all relative and absolute maximum and minimum values and inflection points. State clearly the intervals on which the function is increasing ($\uparrow$), decreasing ($\downarrow$), concave up ($\cup$), and concave down ($\cap$). Determine x- and y-intercepts and sketch the graph. $y = x(x-6)^5$