1. a) (8 pts) Let $f(x) = \sqrt{x^4 - 2x^2 + 3}$ on [-2, 3]. WeBWorK Day 28 #8. Find the absolute max and min of f and the points at which these occur. (You may assume the term in the square root is always positive.) Carefully simplify f'. Show your work.

The absolute max value is ______ occurring at x =_____. The absolute min value is ______ occurring at x =_____. b) What theorem did you use? ______

2.	(6 pts) From the next exam: Complete the sta which illustrates it on the axes provided. Assu	atement of the Mean Value Th me that f is a	eorem then draw and label diagram function on the
	$interval _a, b_ and a$ a point c in (a, b) so that (fill in below)	function on the	interval _a,b Then there is
			Put illustration here
	=		

a) (2 pts) Complete the definition. If f is defined at x = c, then c is a critical point of f if:

3. Optional Bonus: Re-use some of the information in Problem 1 to determine the intervals where $f(x) = \sqrt{x^4 - 2x^2 + 3}$ is increasing and where it is decreasing. Use a number line to summarize your results.