Q 7

Quiz #7 Math 101 Semester 101

Name:	I.D.	Section #	25

1. Consider $f(x) = 2x + 3x^{\frac{2}{3}}$, find interval of increasing decreasing concavity and IP.

$f'(x) = 2 + 2x^{-\frac{1}{3}}$

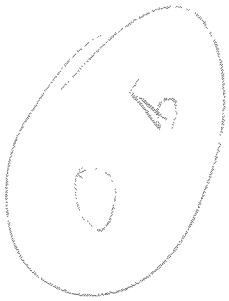
$f'(c) = 0$

$-2 = 2x^{-\frac{1}{3}}$

$-1 = \frac{1}{\sqrt[3]{x}}$

$-\sqrt[3]{x} = 1$

$x = -1$



2. . Let $f(x) = |2 - x|$. Show that there is no c such that $\frac{f(3) - f(1)}{3 - 1} = f'(c)$, explain why this does not contradict the Mean Value Th.

The mean Value the..

let f is a function in interval (a,b) such that

* f is cont.

* ~~f is diff in (a,b)~~

~~f'(c) = 0~~

$f'(x) = 1 - \frac{1}{x} = 0$ ✓

~~f is diff~~ There is no critical number, so, we couldn't use mean Value Th.