

Math 1309

Quiz #7

Chapter 12:1-2

Name: _____

1. Determine the intervals where $f(x)$ is increasing and decreasing and the local extrema.

$$f(x) = 18x - 15x^2 - 4x^3$$

Find the 2nd derivative.

2. $f(x) = 3x^5 - 40x^3 + 30x^2 + 9$

3. $f(x) = 2x + \frac{16}{x^2}$

4. Determine the intervals here $f(x)$ is concave up, concave down, and any inflection points.

$$f(x) = x^4 - 3x^3 + 3x^2 - x$$

5. $f(x)$ is continuous. Use the given information to sketch the graph.

$$\lim_{x \rightarrow -\infty} f(x) = -3 \quad \lim_{x \rightarrow \infty} f(x) = 3$$

x	-2	-1	0	1	2
$f(x)$	0	2	0	-2	0

