

Math 157 - Quiz 9

November 2, 2016

Name _____

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (8 points) Let $f(x) = 8x^3 - x^4$. Find open intervals on which f is increasing/decreasing. Identify all relative extrema. Find open intervals on which the graph of f is concave up/down. Identify all inflection points.

2. (2 points) For each part, circle the correct conclusion.

(a) If g' is increasing, then

- i. the graph of g has positive slope.
- ii. the graph of g is concave up.

(b) If $g(c) = 0$, then

- i. c is a critical point of g .
- ii. $(c, 0)$ is an x -intercept of the graph of g .