

King Fahd University of Petroleum and Minerals

Department of Mathematical Sciences

Math 101 (calculus I)

Quiz 5 (A) Semester I, 2004-2005 (041)

Name:.....

ID #:.....

Sec#:.....

(1) Let $f(x) = x^{\frac{4}{3}} - x^{\frac{1}{3}}$. Find

(25pts)

(a) x -intercepts and y -intercepts.

(b) The intervals on which f is increasing and the intervals on which f is decreasing.

(c) Relative extrema

(d) The open intervals on which f is concave up and on which f is concave down.

(e) x -coordinates of all inflection points

(f) the point of vertical tangency and cups (if any).

(g) Sketch the graph

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