

King Fahd University of Petroleum and Minerals

Department of Mathematical Sciences

Math 101 (calculus I)

Quiz 6 Semester I, 2004-2005 (041)

Name:.....

ID #:.....

Sec#:.....

(1) The position function of a particle moving along a coordinate line is $S(t) = t^4 - 4t + 2$, $t \geq 0$
where S is in feet and t is in seconds. (6pts)

(a) Find the velocity and acceleration functions.

(b) At what times is the particle stopped.

(c) When is the particle speeding up ? Slowing down.

(2) Find the absolute extrema of $f(x) = 8x - x^2$ on $[0, 6]$ and determine where these values occur. (4pts)

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