

MATH 131, Fall 2019

Name: _____

Quiz 7

10/31/19

Section: _____

For full credit you must present a clearly organized solution, showing all supporting calculations.

1. A particle moves along a line according to the position function $s(t) = t^4 - 6t^3 + 10t^2 - 6t + 4$, where s is in meters and t is in seconds.

(a) Find the particle's maximum and minimum displacements from its original position in the first three seconds, and indicate all times t , $0 \leq t \leq 3$, where it achieves these displacements.

(b) Find the *total distance* traveled by the particle in the first three seconds.