

Name _____

Calculus Assignment – Rectilinear Motion

Given the function: $s(t) = t^3 - 6t^2$

- a) Find the velocity function $v(t)$.

- b) Find any and all times where the velocity of the particle is zero.

- c) Find the acceleration function $a(t)$.

- d) Find any and all times where the acceleration of the particle is zero.

- e) Create an Important Time Chart (ITC)

- f) Sketch a position graph of the particle's behavior.