

2-3)

Consider a particle whose velocity (in one dimensions along the x-axis) is given by

$$v(t) = 3t^3 - 6t^2 + 4t + 2,$$

where the numbers are correctly adjusted so that  $t$  is in seconds and  $v$  is in m/s.

- a) Find the object's acceleration at time = 2 seconds.
- b) Find the object's location (or position) when  $t = 2$  seconds if it started at the origin at  $t = 0$ .