NAME (Print!): _____

Check one: (1pm): _____

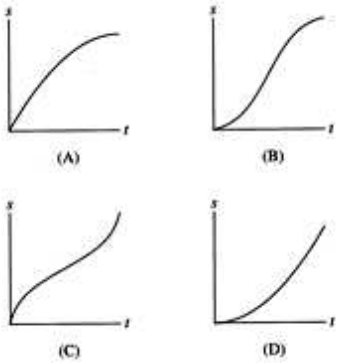
(2pm): _____

Quiz 3

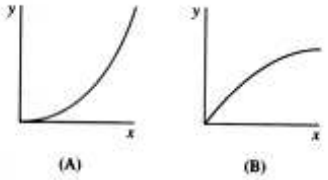
Answer the following three problems. Justify your work where appropriate.

Problem 1, 4 points: The graphs represent the position s of moving particles as a function of time t Math each graph with one of the following statements:

(1) Speeding up
(2) Speeding up and then slowing down
(3) Slowing down
(4) Slowing down and then speeding up



Problem 2, 2 points: Which graph has the following property: for all x the average ROC over $[0, x]$ is greater than the instantaneous velocity at x? Explain.



Problem 3, 4 Points: The population of a city (in millions) at time t (years) is $P(t) = 2.4e^{0.06t}$, where $t = 0$ is the year 2000. When will the population double from its size at $t = 0$?