

**HW 1 (Due January 7):** A sprinter starts from rest and runs a short race with a constant acceleration.

- a. If it takes her  $T$  seconds to run the first  $1/10$  of the race, how long does it take her to run the entire race?
- b. If it takes her  $T$  seconds to run the last  $1/10$  of the race, how long does it take her to run the entire race?