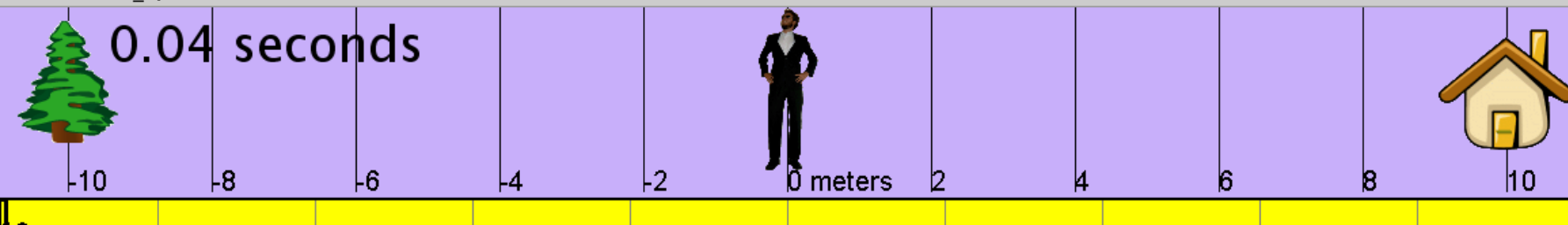


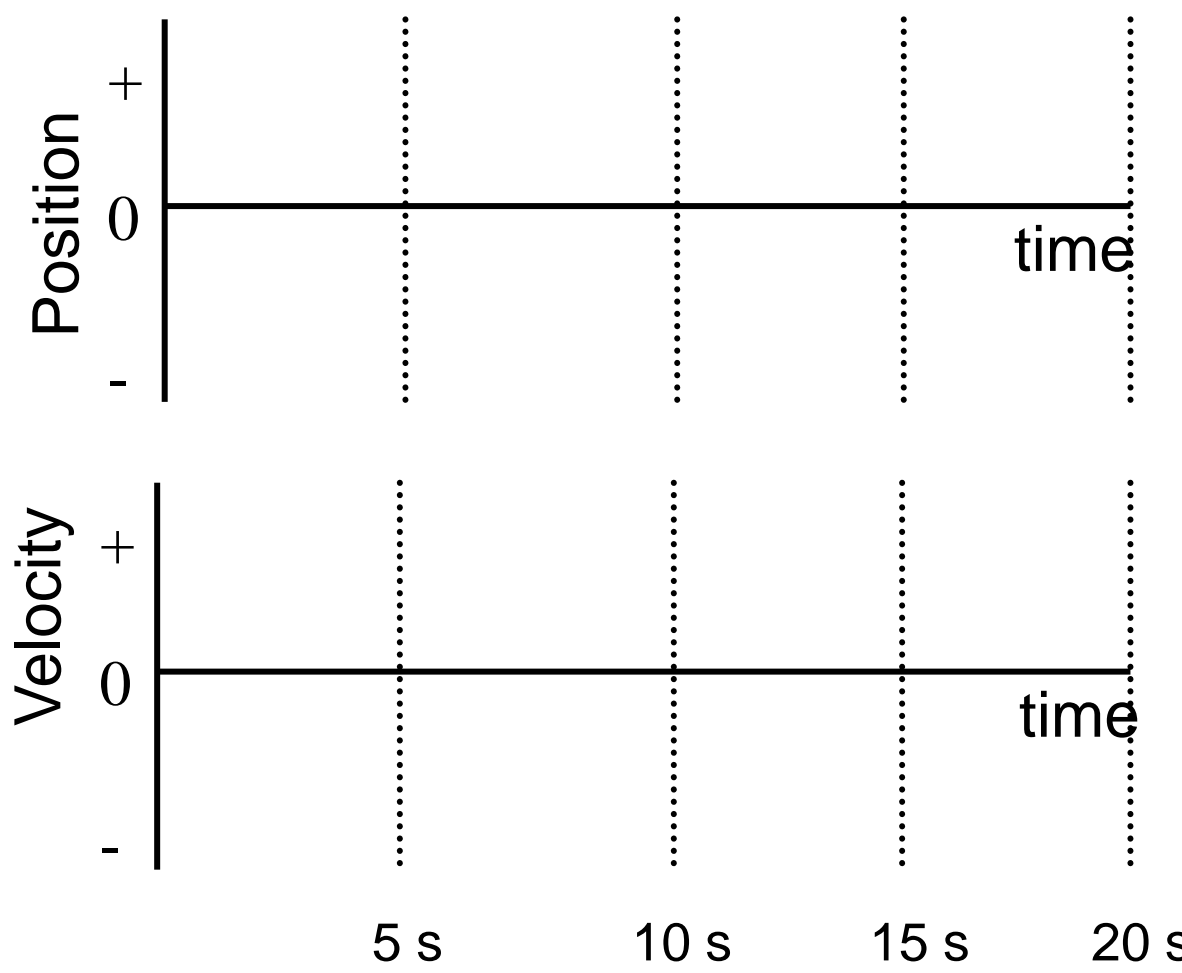
The Moving Man SIM

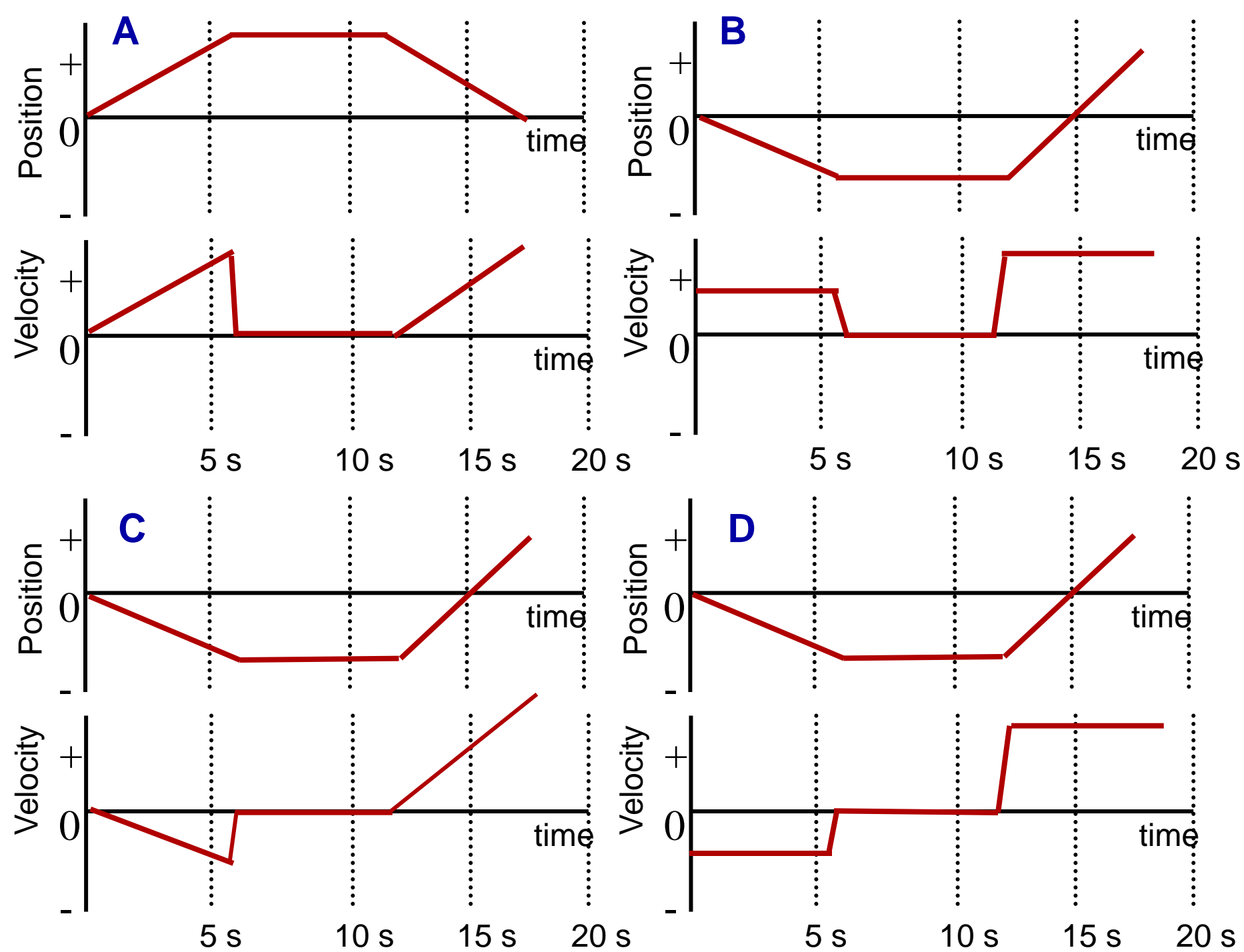
This is the part of lecture utilizing PhET's "Moving Man" simulation and all of its activities. It is probably most useful for demonstrating and clarifying negative and positive position/velocity/acceleration, which difficult if position, velocity, and acceleration have never been conceptualized this way.

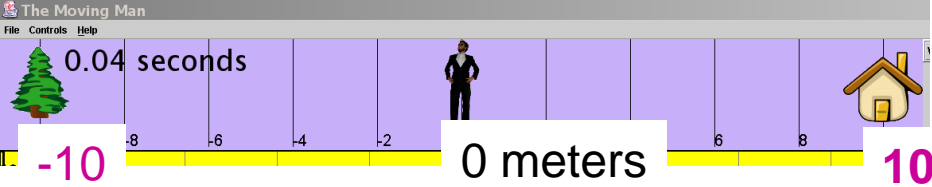


Demo 4:
 Sketch **position vs time** and **velocity vs time** graphs for when Moving Man: walks steadily towards the tree for 6 seconds, then stands still for 6 seconds, and then towards the house twice as fast as before for 6 seconds.

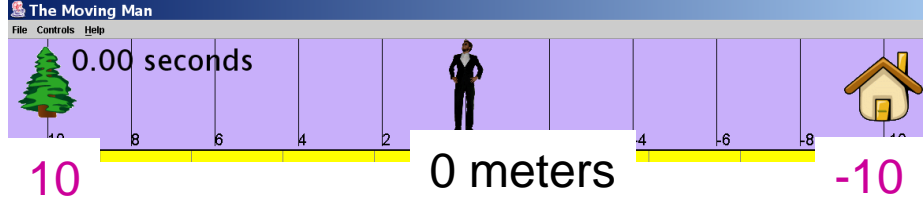
Do yours as dashed line, compare with team members then make solid line based on group.





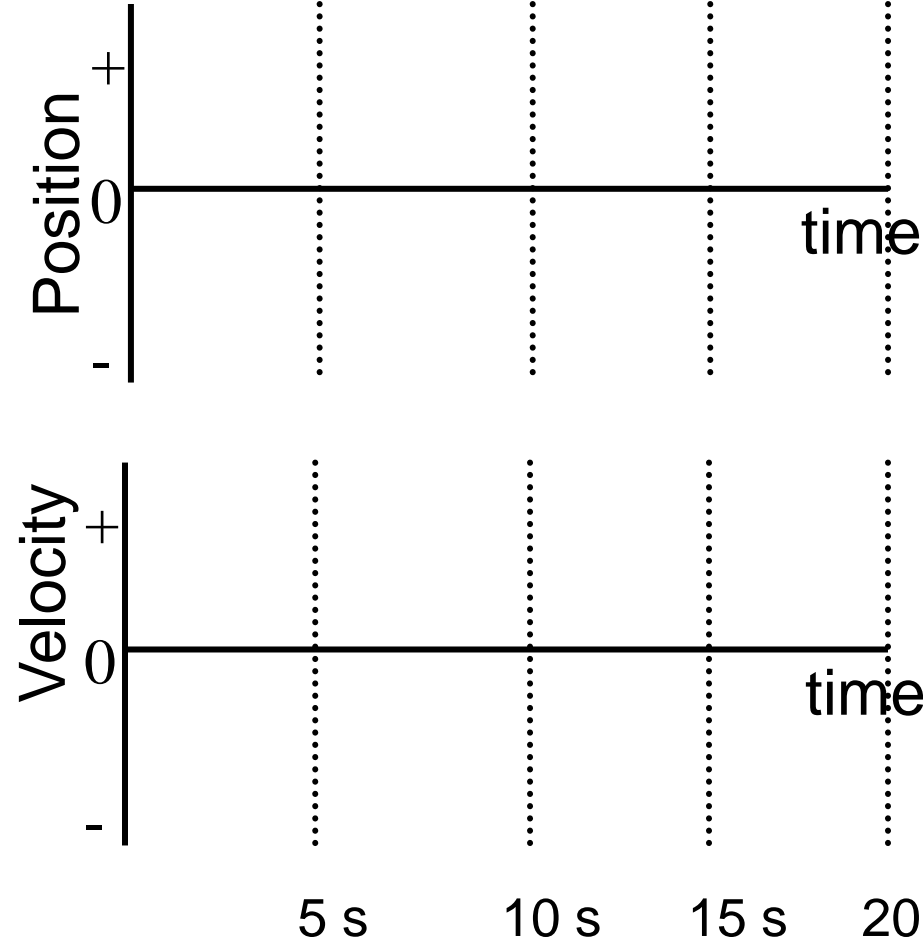
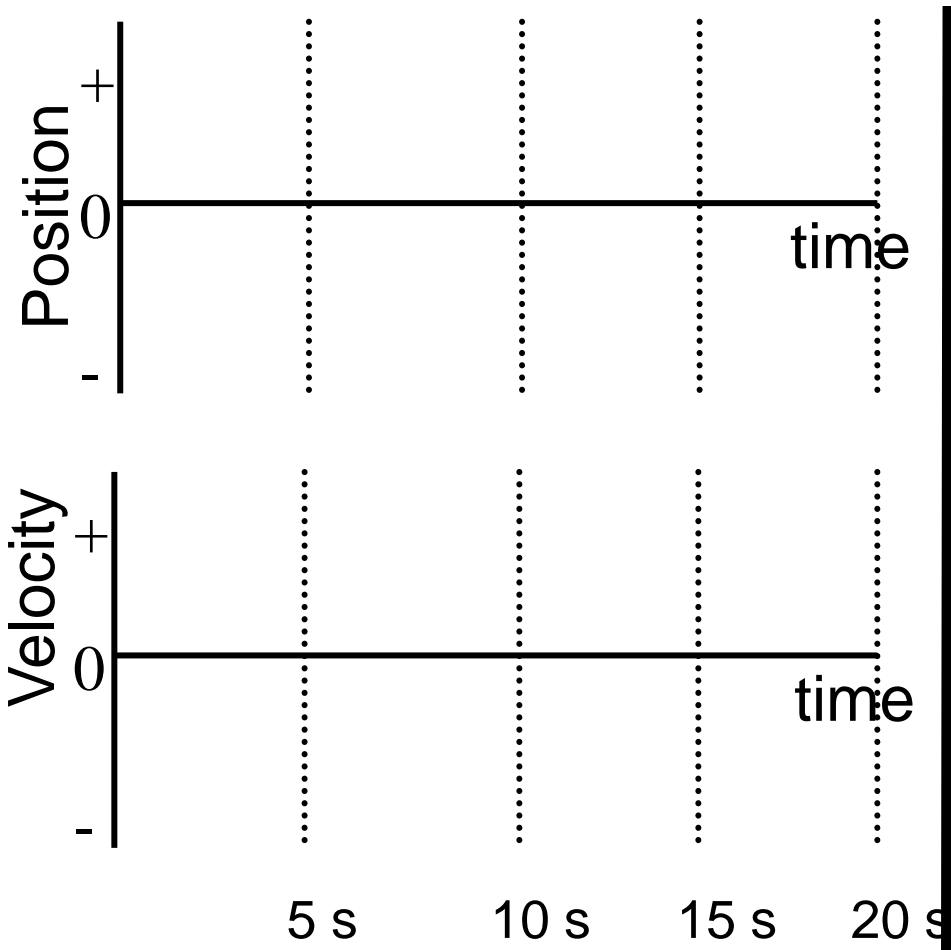


Choose to define positive direction as towards house.



Choose to define positive direction as towards tree.

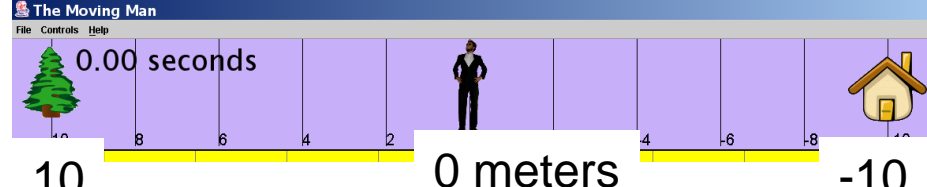
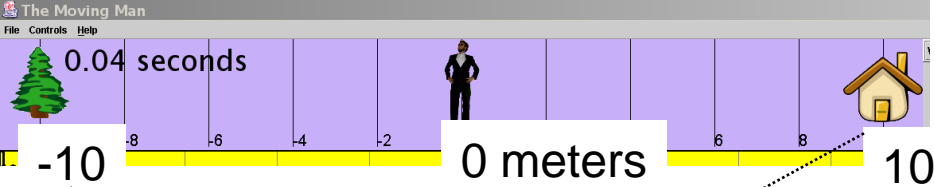
Sketch graphs for Moving Man walks from the house to the tree:



case a. positive towards house. case b. positive towards tree.

How do the graphs in these 2 cases compare?

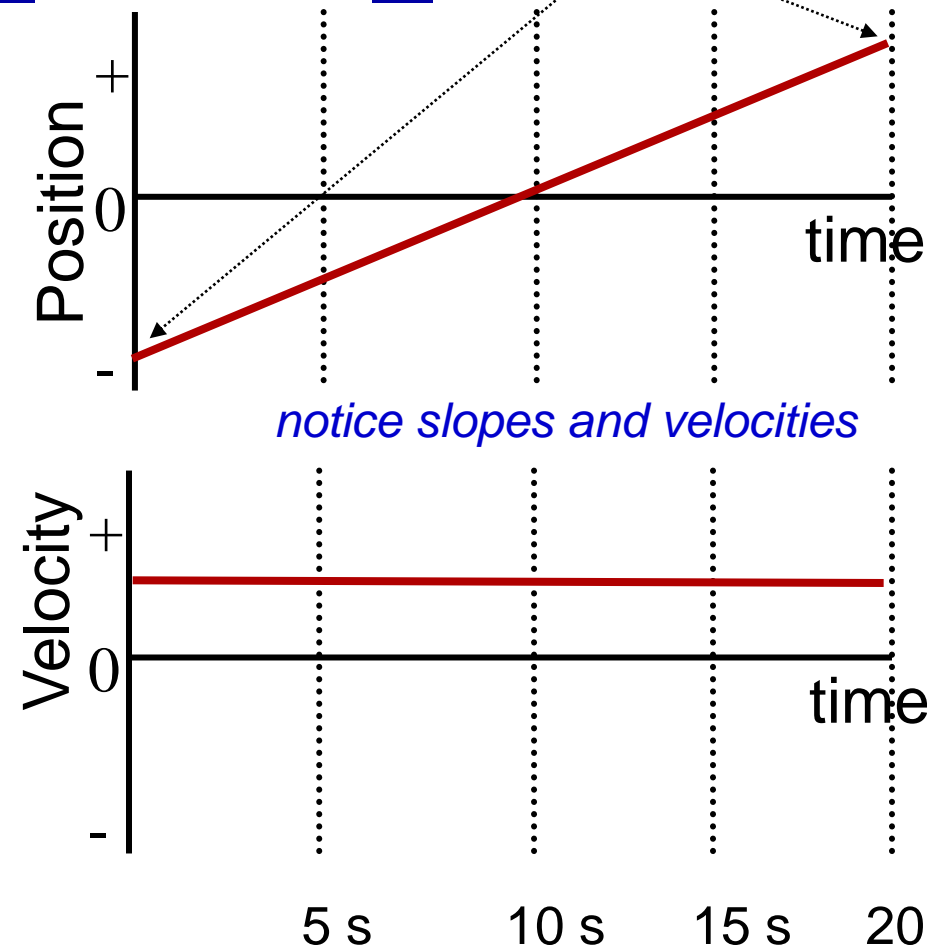
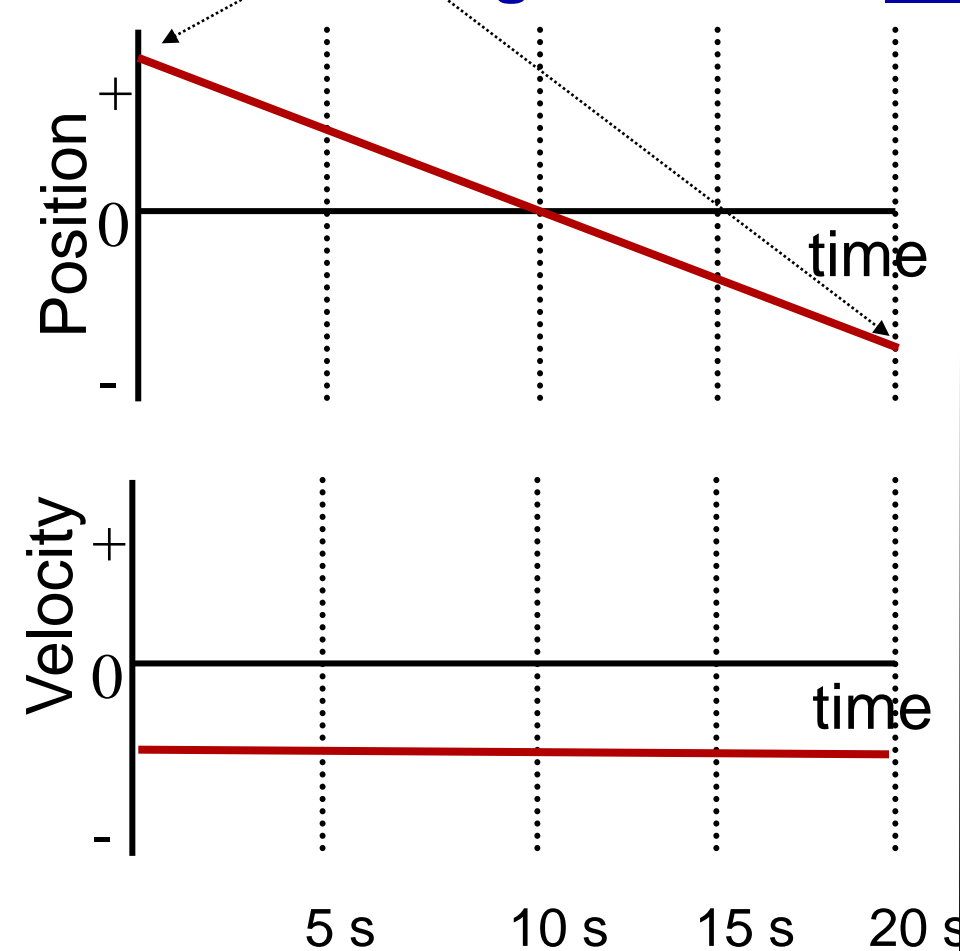
- a. The position vs time graphs are different; the velocity vs. time graphs are the same.
- b. Both the position vs. time and velocity vs. time graphs are different.
- c. Both the position vs. time and velocity vs. time graphs are the same.
- d. The position vs time graphs are the same. The velocity vs. time graphs are different.
- e. I can't make sense of these graphs.



Choose to define positive direction as towards house.

Choose to define positive direction as towards tree.

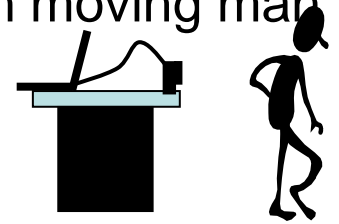
Sketch graphs for Moving Man walks from the house to the tree:



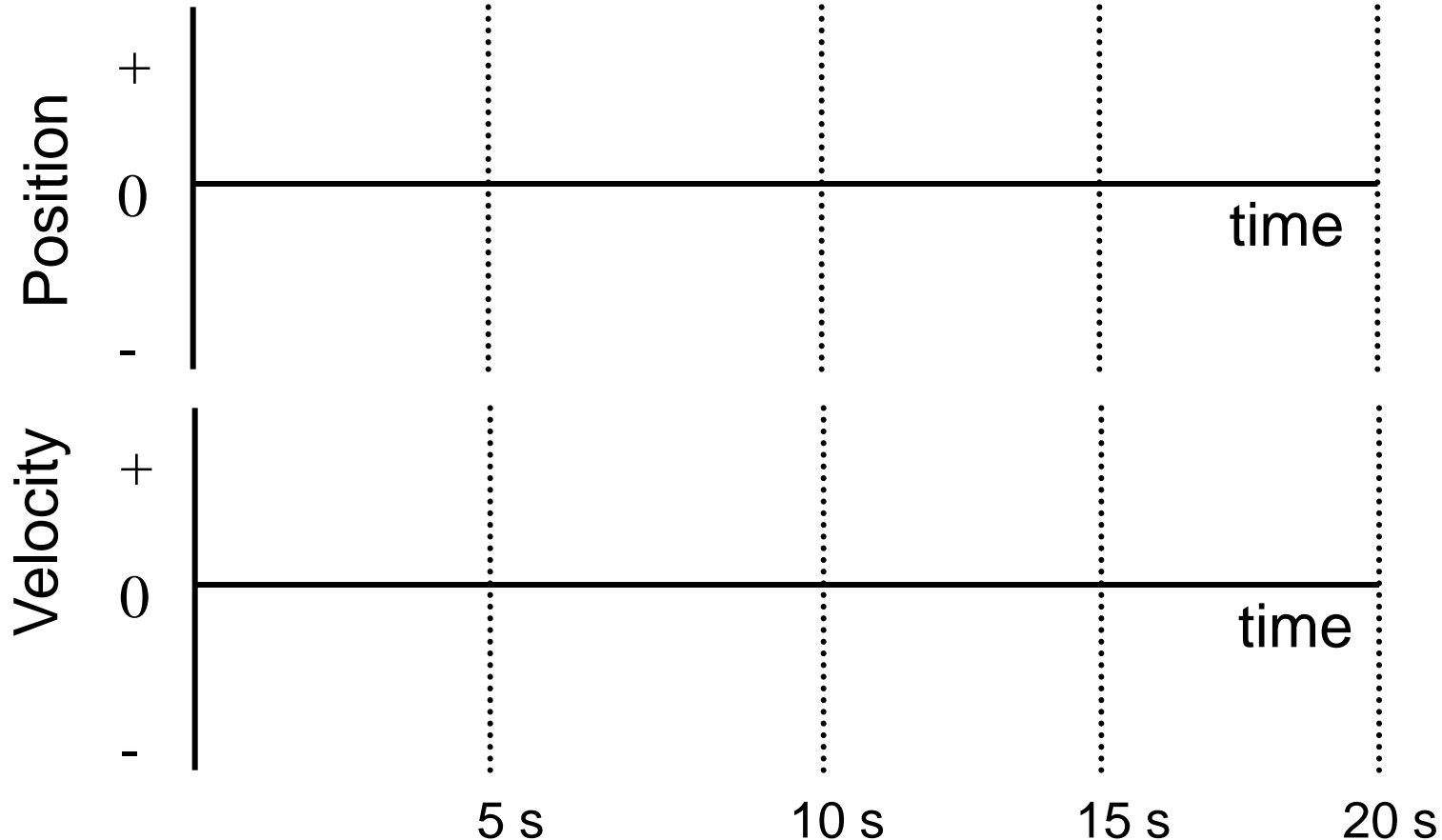
Human Motion

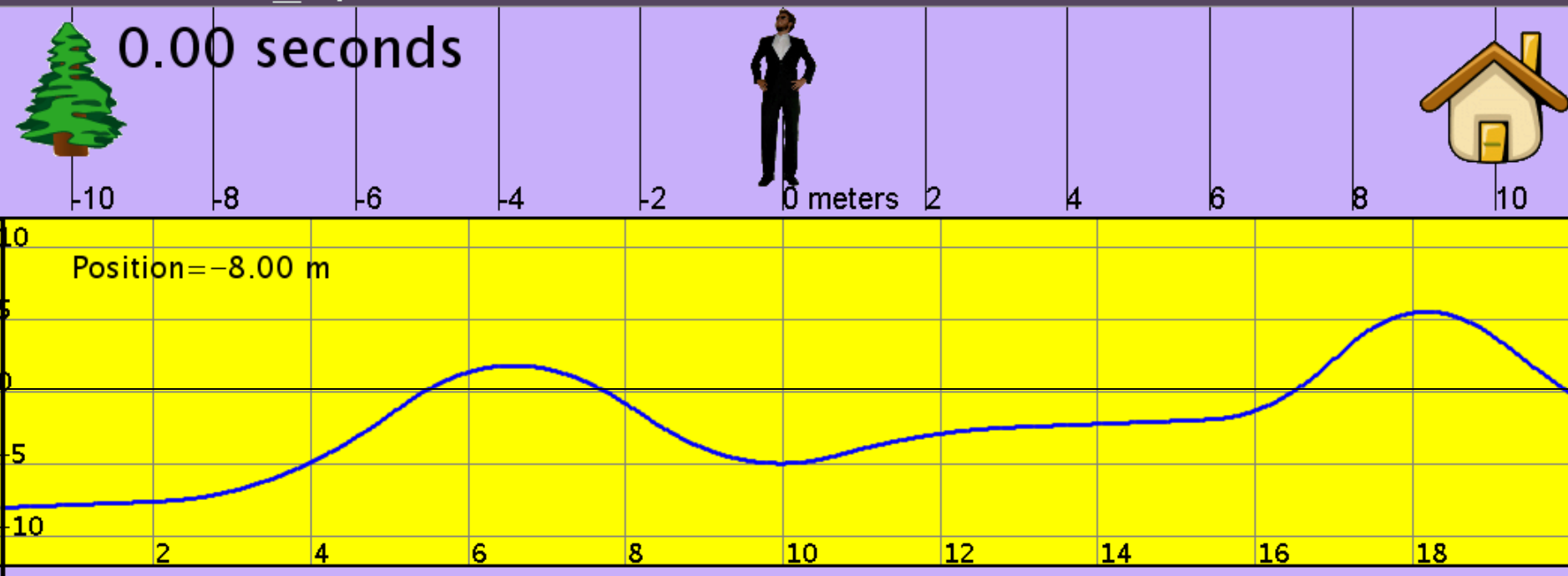
Demo 4:

- Sketch **position vs. time** and **velocity vs. time** graphs for when moving man
- walks steadily towards the tree for 6 seconds
 - then stands still for 6 seconds, and
 - then towards the house twice as fast as before.



Draw your graphs with dashed lines, compare results with team members and then use solid lines based on group results.





How many times does the man's speed go to zero?

- Never
- Once
- Twice
- Three times
- Four times