Name_____

Date_____ Pd____

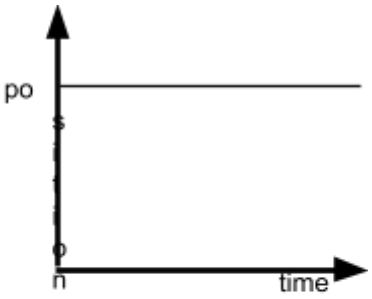
Constant Velocity Particle Model Ultrasonic Motion Detector Lab:

Multiple Representations of Motion

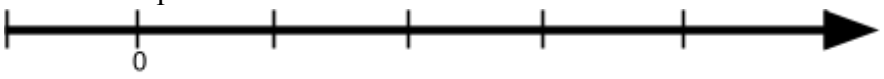
Do the following for each of the situations below:

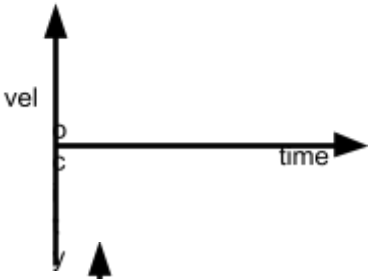
a. Move, relative to the motion detector, so that you produce a position vs. time graph that closely approximates the graph shown.
b. In the space provided, describe how you must move in order to produce the position vs. time graph shown in the space to the right of the velocity vs. time graph. Be sure to include each of the following in your description: starting position, direction moved, type of motion, relative speed.
c. On the velocity vs. time axes, sketch the velocity vs. time graph that corresponds to the position vs. time graph shown.
d. In the space provided, sketch the motion map that corresponds to the motion described in the position vs. time graph.

1. Written description

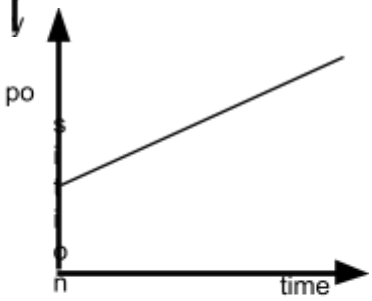


Motion map

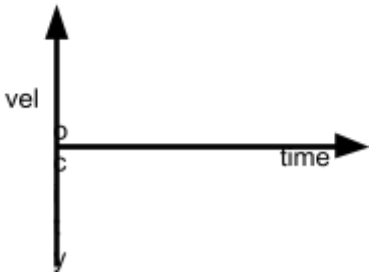


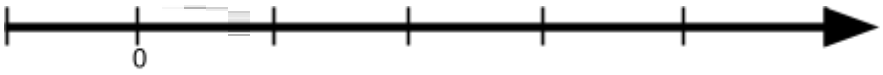


2 Written description



Motion map





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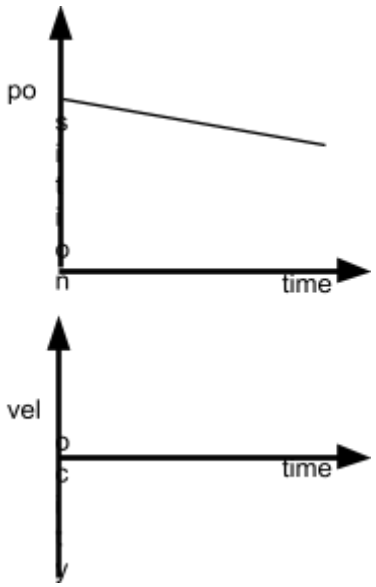
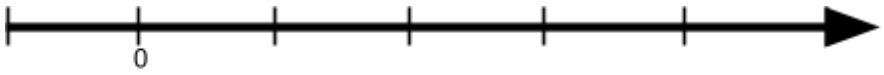


Motion map



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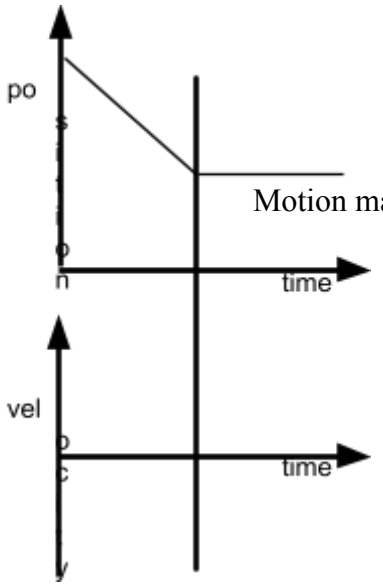
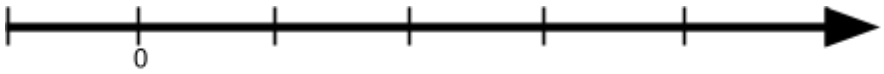


Motion map



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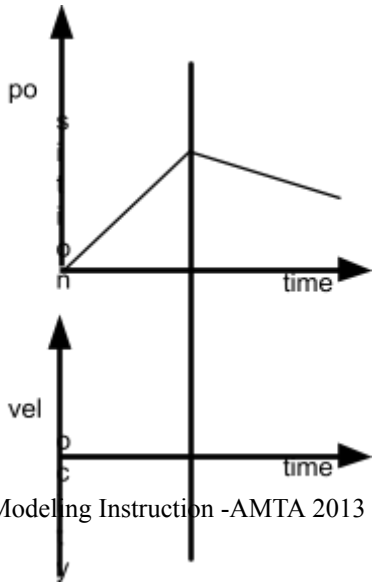
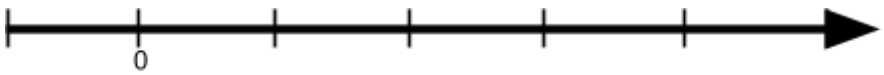


Motion map



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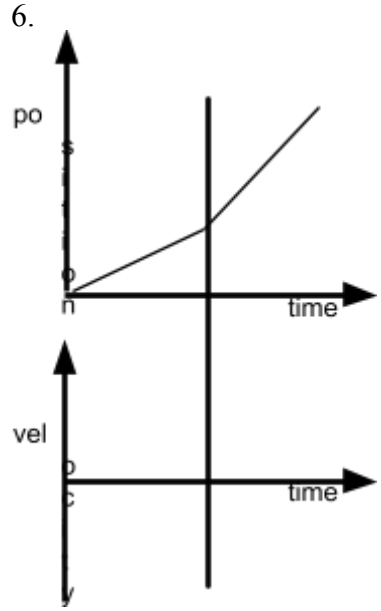
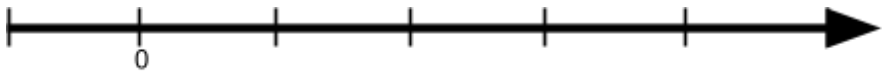


Written description

Motion map



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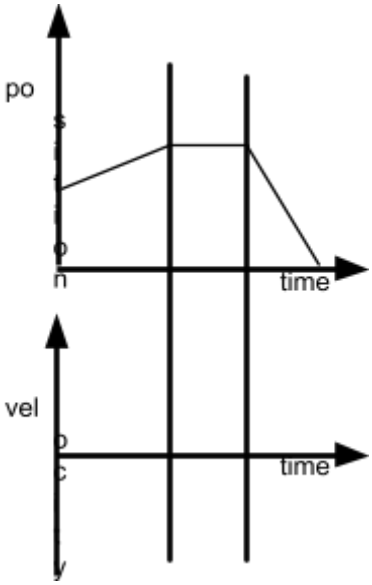
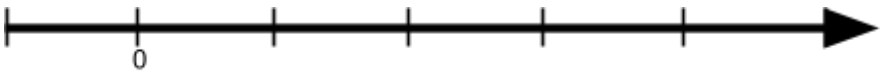


Written description

Motion map



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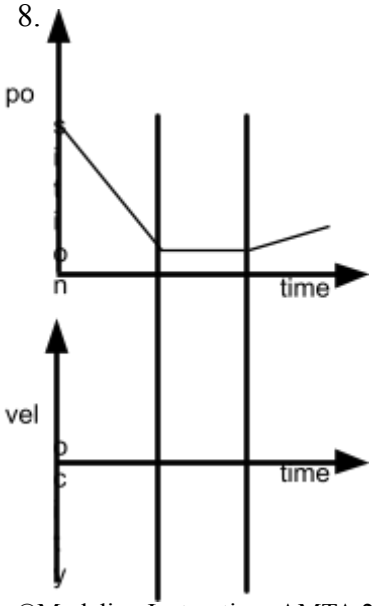
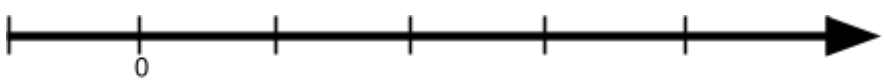


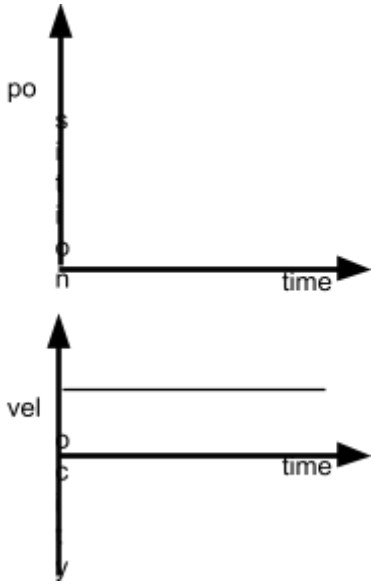
Written description

Motion map

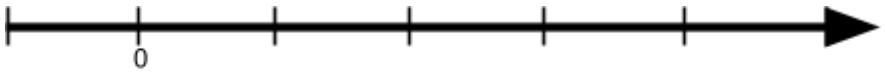


For the following, match the velocity-time graphs and sketch corresponding position-time graphs

9. Written description



Motion map



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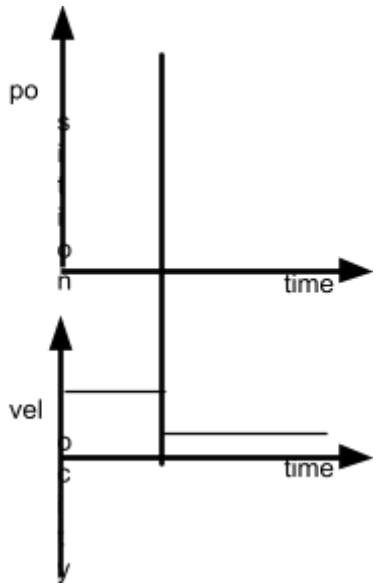
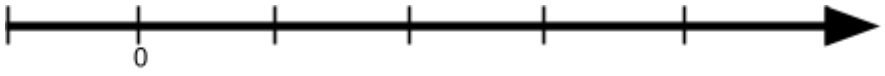
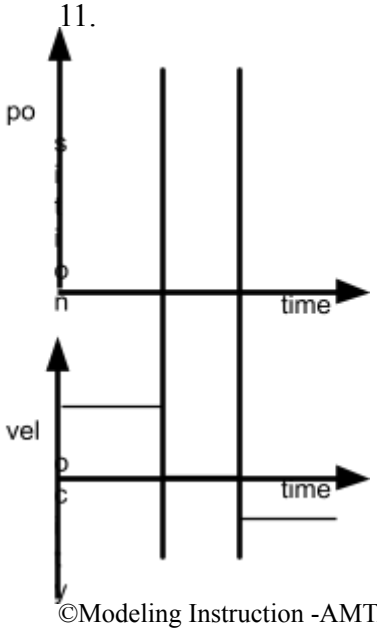


Motion map



11. Written description



Motion map