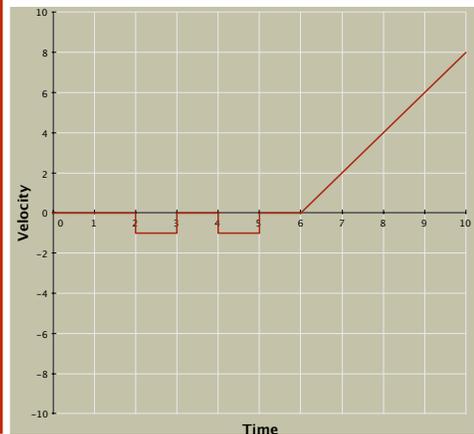
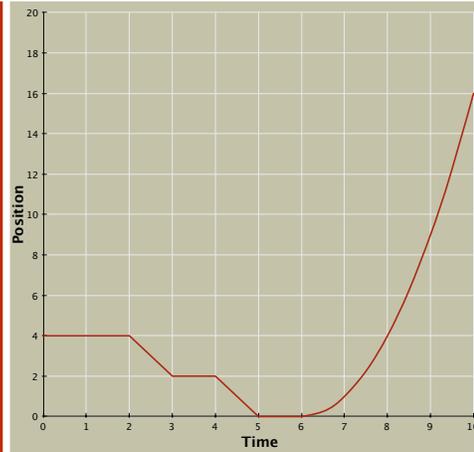


Motion Graphs

Kinematics Unit



Worksheets for Kinematics (Solutions)

By Robert Prior

Using motion graphs is an important skill. These worksheets provide students with practice interpreting and drawing motion graphs.

Expectations	
A1.12	use appropriate graphic modes of representation for qualitative and quantitative data
B2.2	analyse and interpret position-time, velocity-time, and acceleration-time graphs of motion in one dimension

Inside

Simple Motion, Multiple Choice 2

Position-time and velocity-time graphs of either constant velocity or constant acceleration. Students choose the best description from a list.

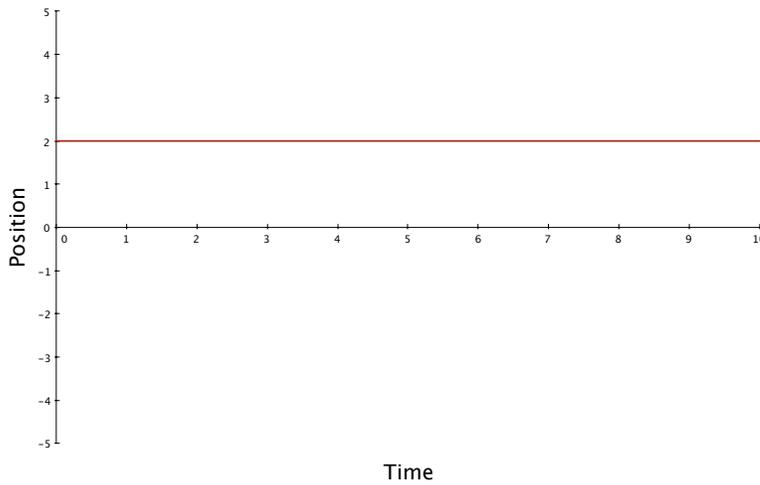
Describing Motion 6

Position-time and velocity-time graphs for simple and slightly-less-simple motion. Students write a short description using proper vocabulary.

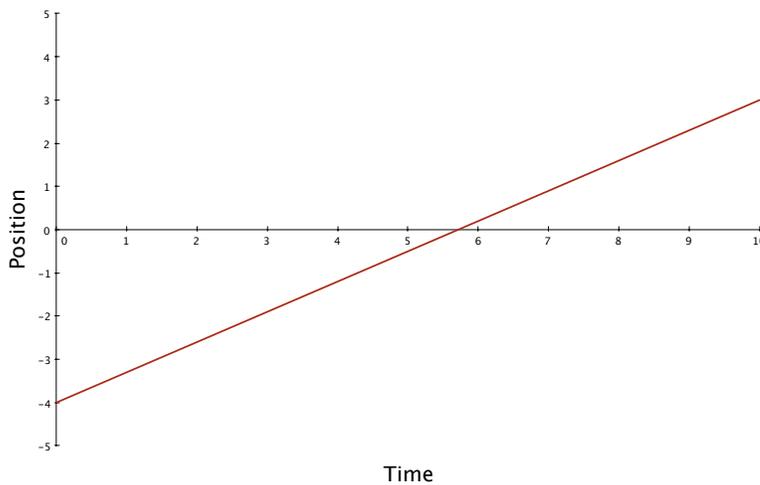
Sketching Motion Graphs 10

Students are given a position-time, velocity-time, or acceleration-time graph for simple or complex motion. They must sketch the missing graphs.

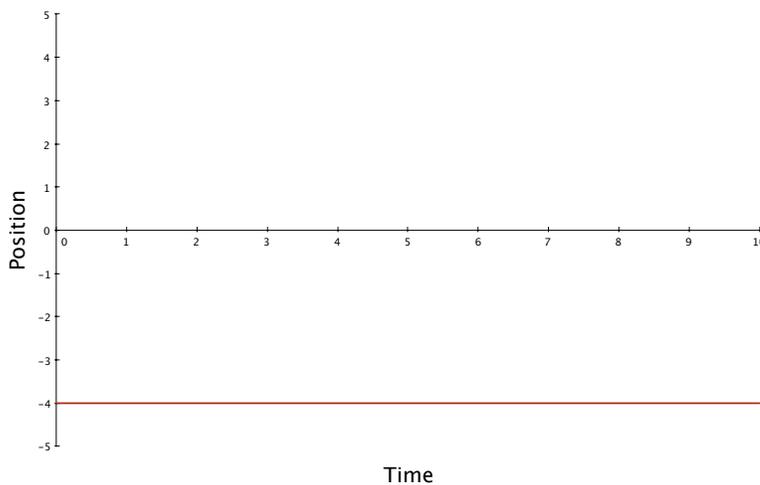
Determine the motion shown by the following graphs. Select the best term from the list.



- at rest
- constant positive velocity
- constant negative velocity
- constant positive acceleration
- constant negative acceleration

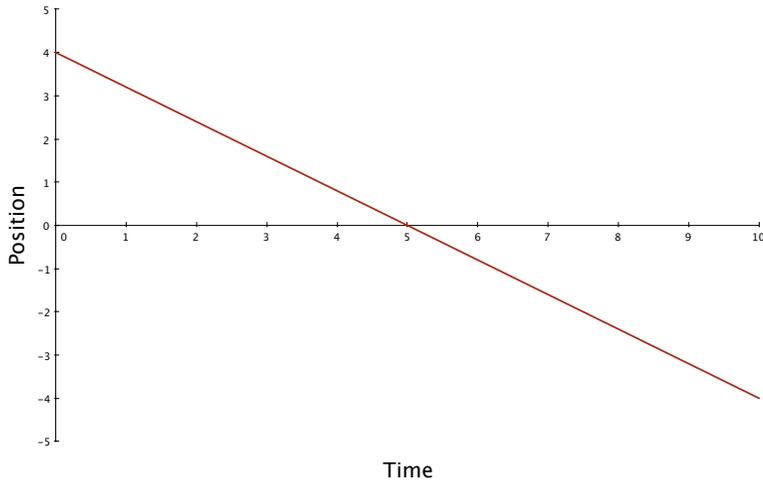


- at rest
- constant positive velocity
- constant negative velocity
- constant positive acceleration
- constant negative acceleration

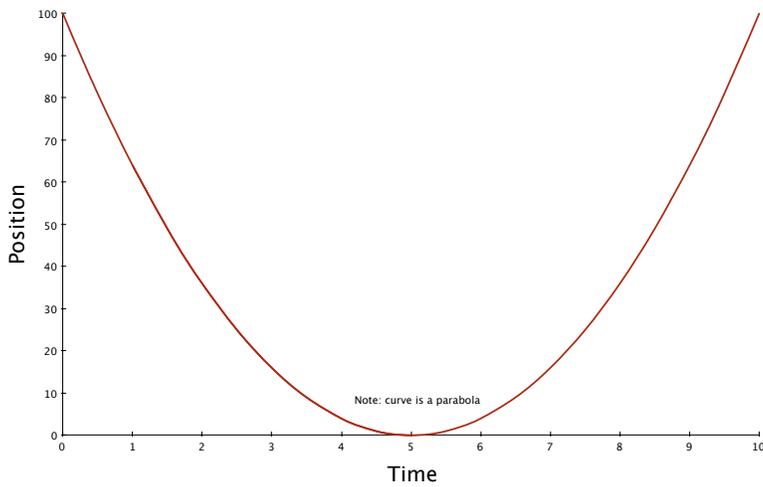


- at rest
- constant positive velocity
- constant negative velocity
- constant positive acceleration
- constant negative acceleration

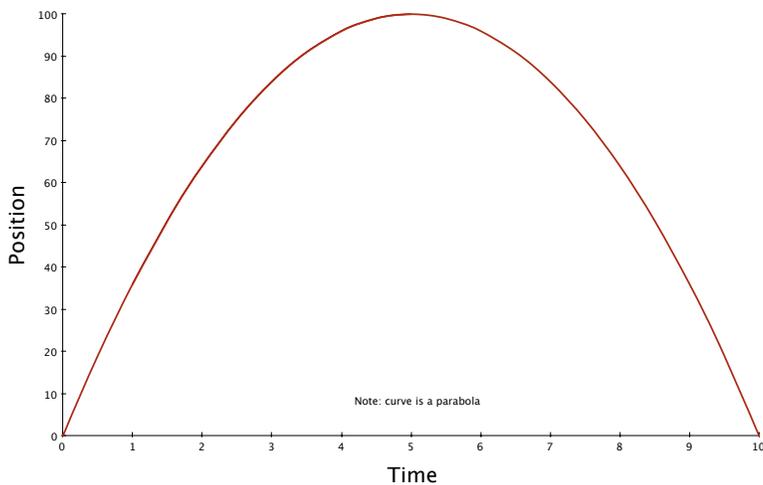
Determine the motion shown by the following graphs. Select the best term from the list.



- at rest
- constant positive velocity
- constant negative velocity
- constant positive acceleration
- constant negative acceleration

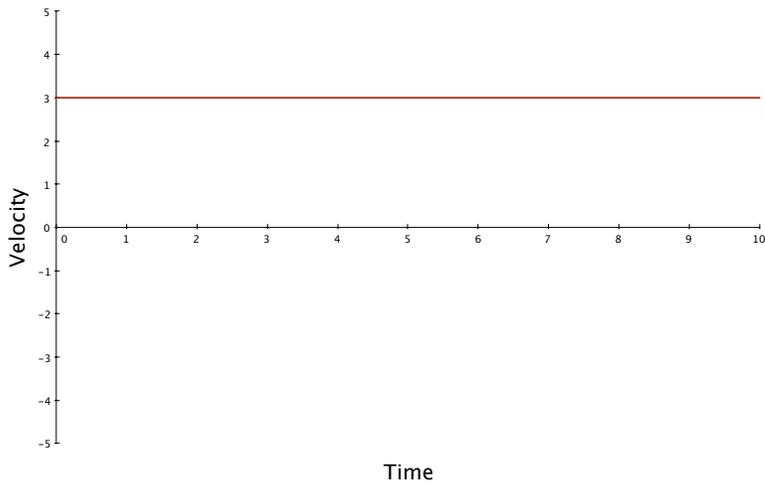


- at rest
- constant positive velocity
- constant negative velocity
- constant positive acceleration
- constant negative acceleration

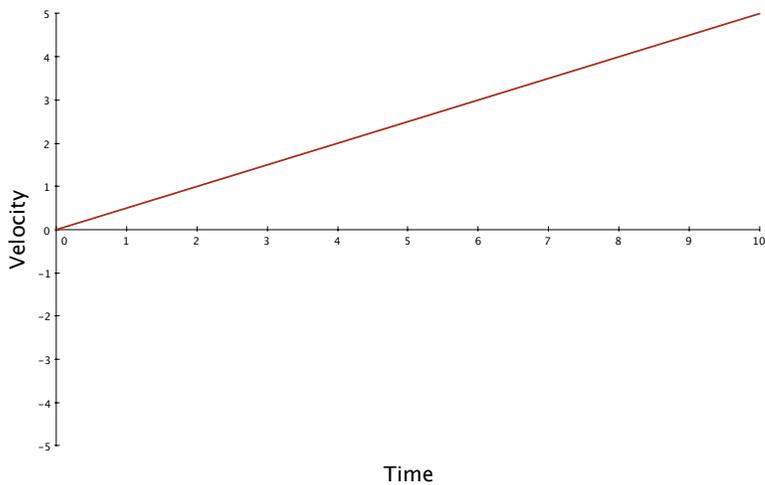


- at rest
- constant positive velocity
- constant negative velocity
- constant positive acceleration
- constant negative acceleration

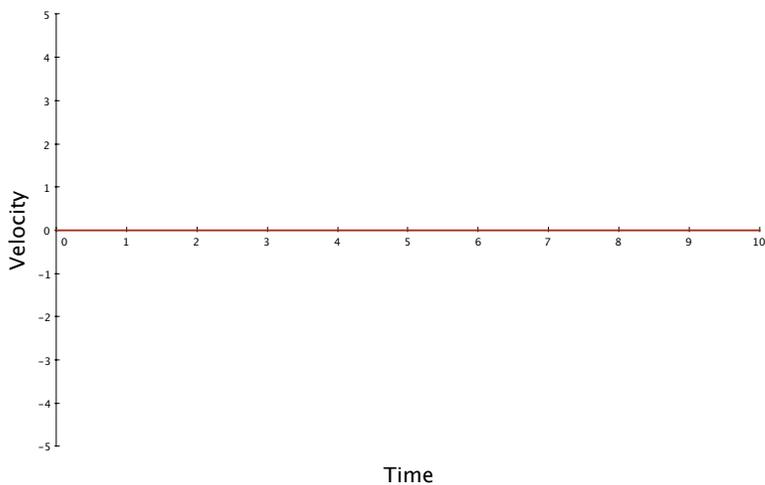
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- at rest
- constant positive velocity
- constant negative velocity
- constant positive acceleration
- constant negative acceleration

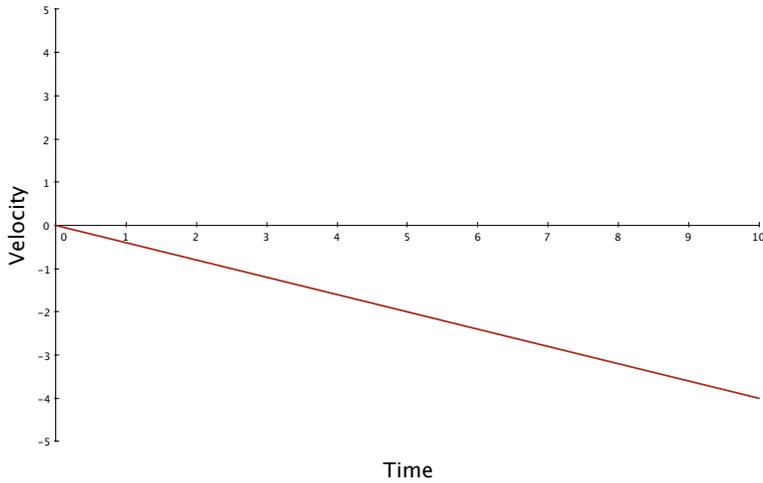


- at rest
- constant positive velocity
- constant negative velocity
- constant positive acceleration
- constant negative acceleration

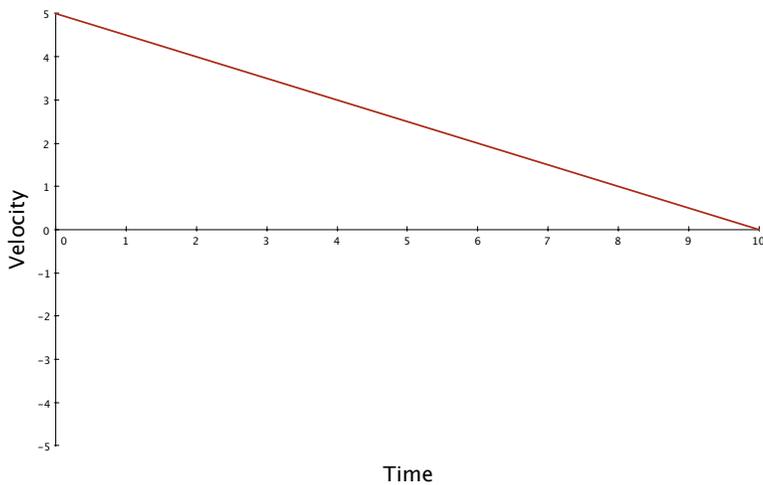


- at rest
- constant positive velocity
- constant negative velocity
- constant positive acceleration
- constant negative acceleration

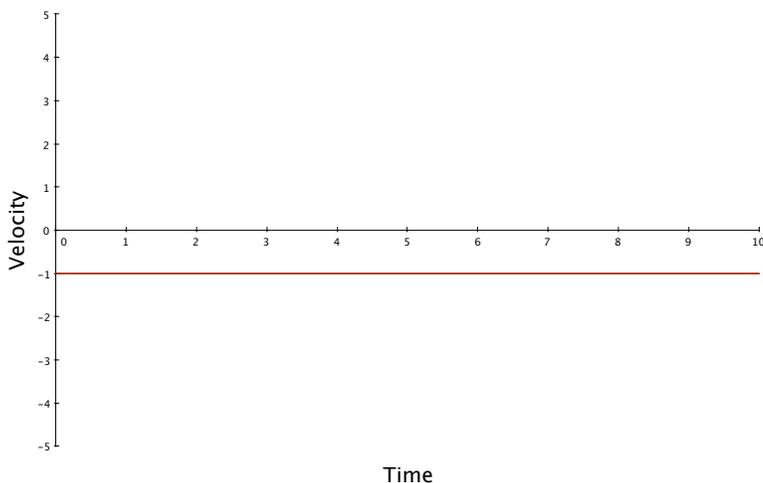
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- at rest
- constant positive velocity
- constant negative velocity
- constant positive acceleration
- constant negative acceleration

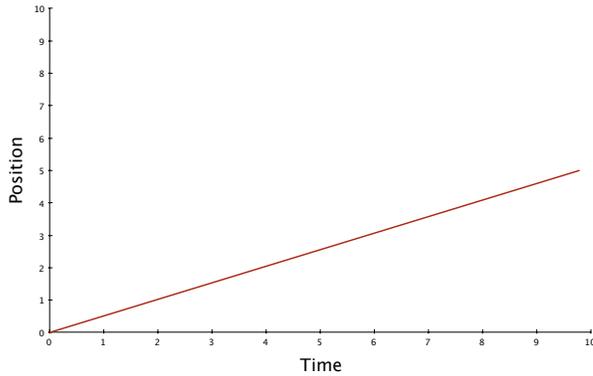


- at rest
- constant positive velocity
- constant negative velocity
- constant positive acceleration
- constant negative acceleration

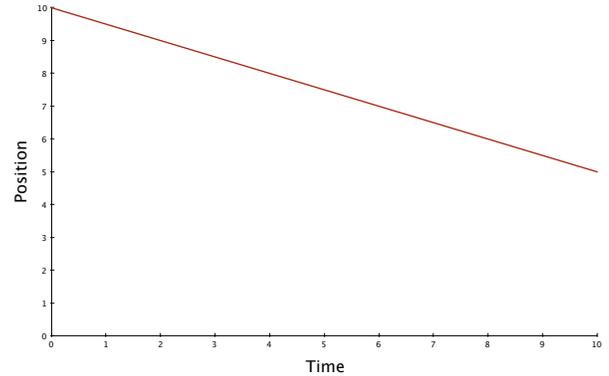


- at rest
- constant positive velocity
- constant negative velocity
- constant positive acceleration
- constant negative acceleration

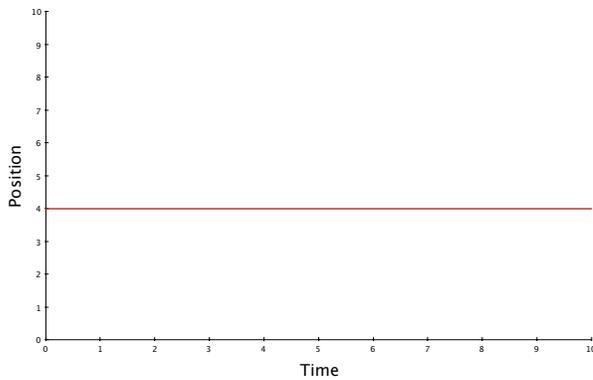
Describe the motion shown by the following graphs. Use terms like *constant positive velocity*, *at rest*, *positive acceleration from rest*, and so on.



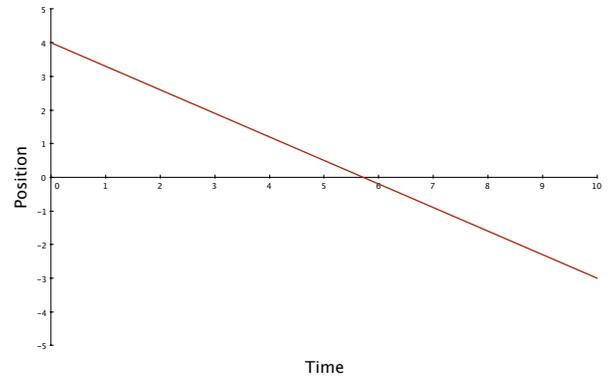
constant positive velocity
uniform motion (forward)



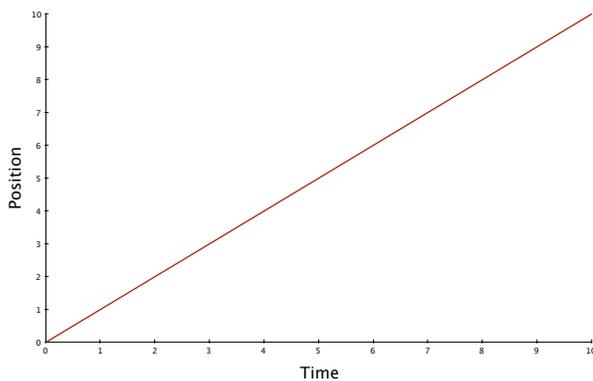
constant negative velocity
uniform motion (backward)



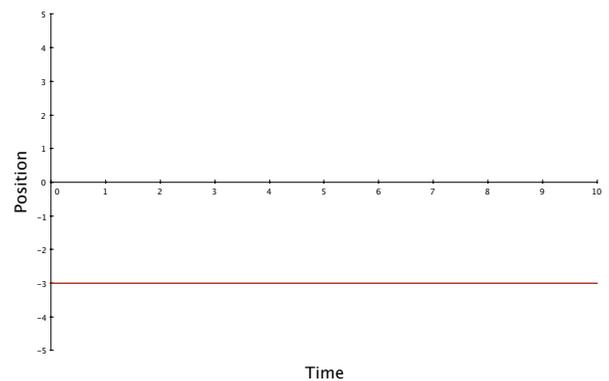
at rest



constant negative velocity
uniform motion (backward)

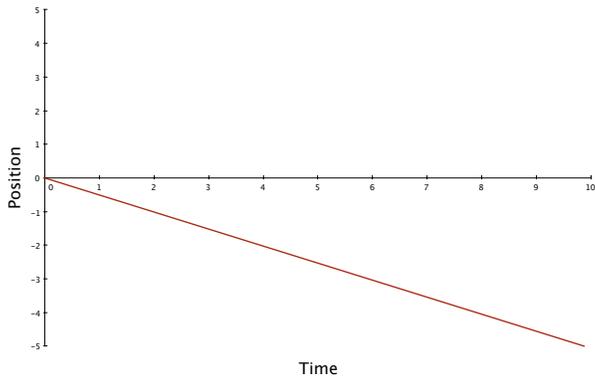


constant positive velocity
uniform motion (forward)

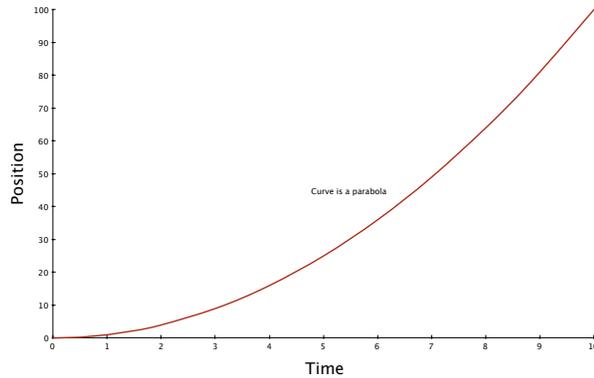


at rest

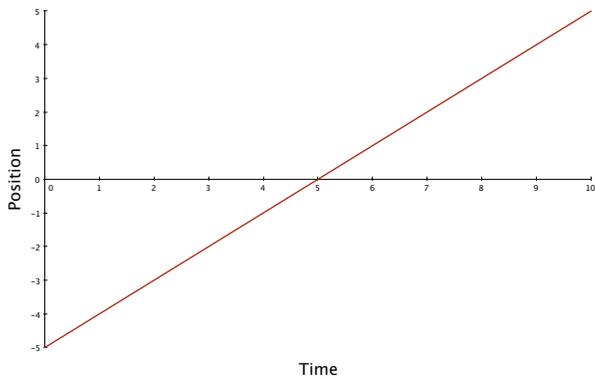
Describe the motion shown by the following graphs. Use terms like *constant positive velocity*, *at rest*, *positive acceleration from rest*, and so on.



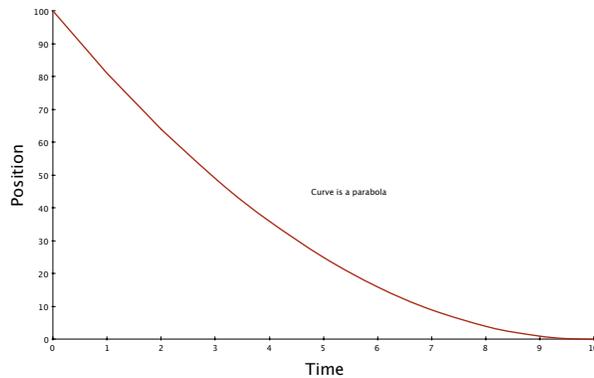
constant negative velocity
uniform motion (backward)



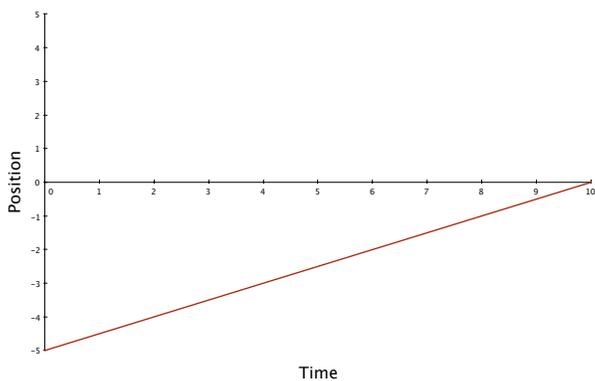
constant positive acceleration



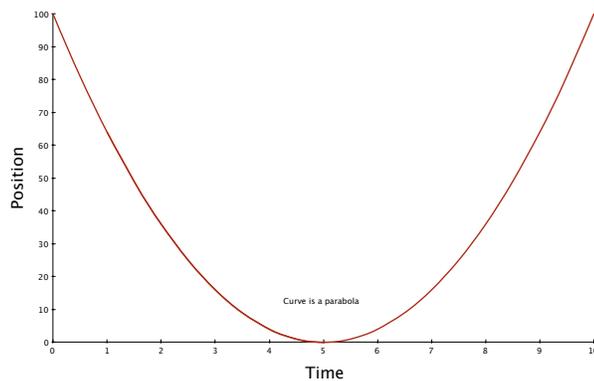
constant positive velocity
uniform motion (forward)



constant positive acceleration

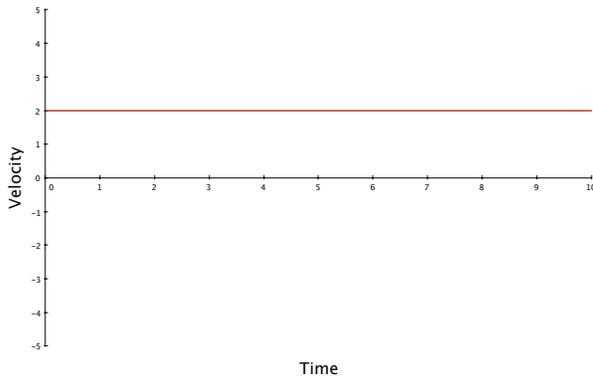


constant positive velocity
uniform motion (forward)

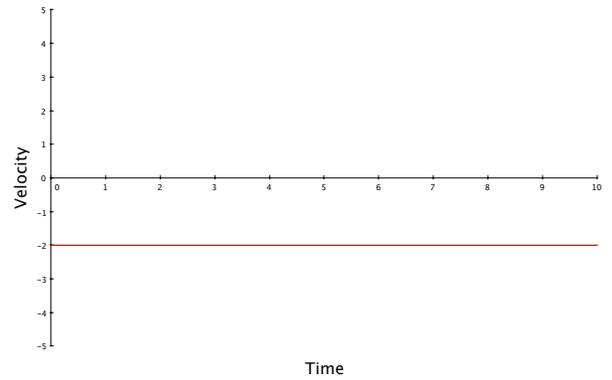


constant positive acceleration

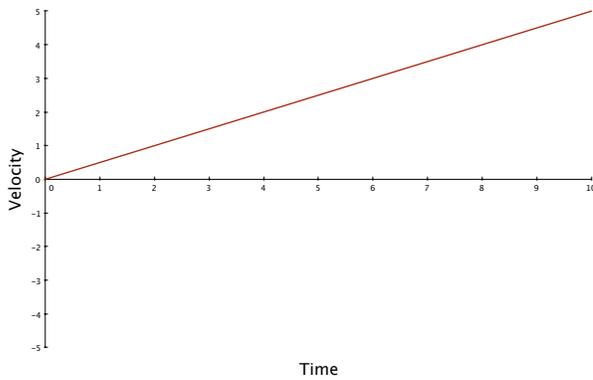
Describe the motion shown by the following graphs. Use terms like *constant positive velocity*, *at rest*, *positive acceleration from rest*, and so on.



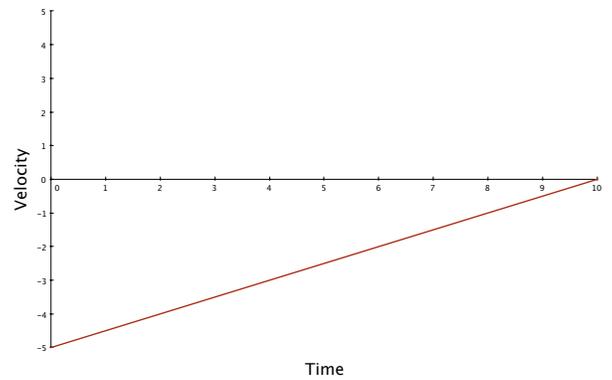
constant positive velocity
uniform motion (forward)



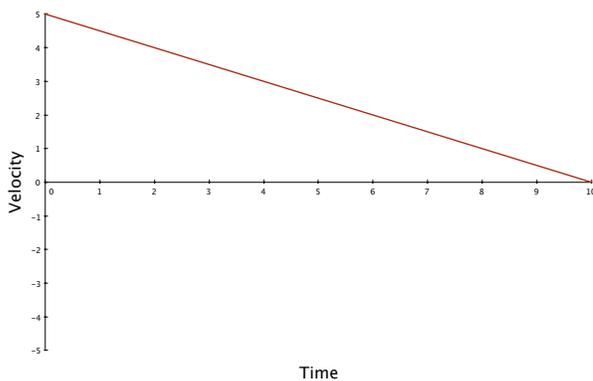
constant negative velocity
uniform motion (backward)



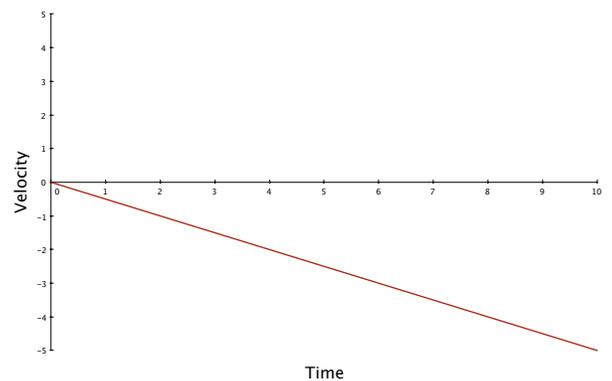
constant positive acceleration



constant positive acceleration

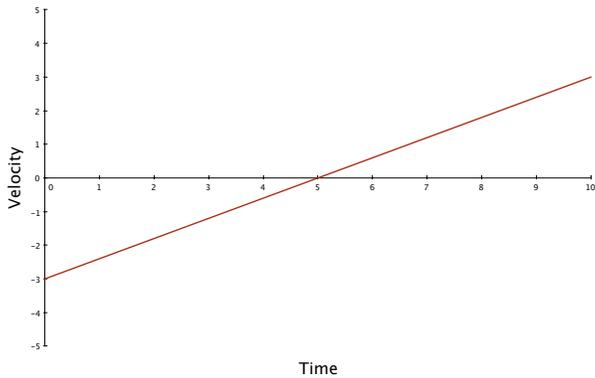


constant negative acceleration

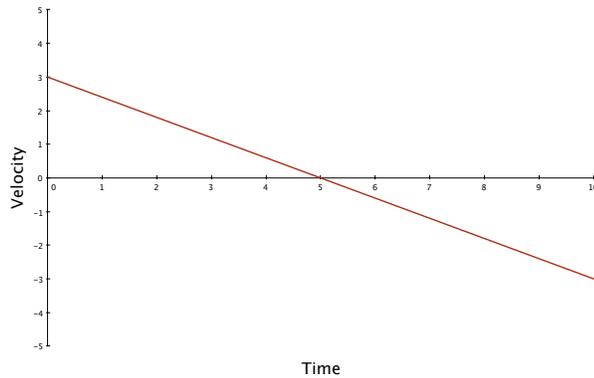


constant negative acceleration

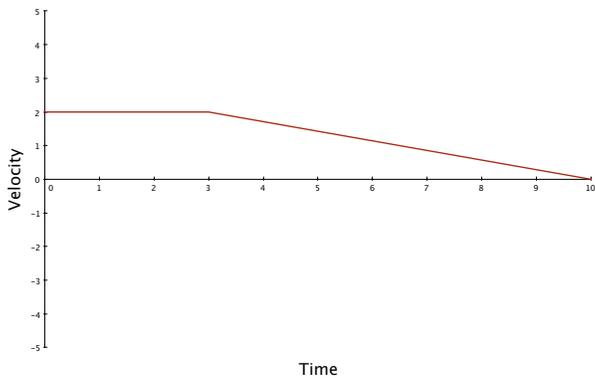
Describe the motion shown by the following graphs. Use terms like *constant positive velocity*, *at rest*, *positive acceleration from rest*, and so on.



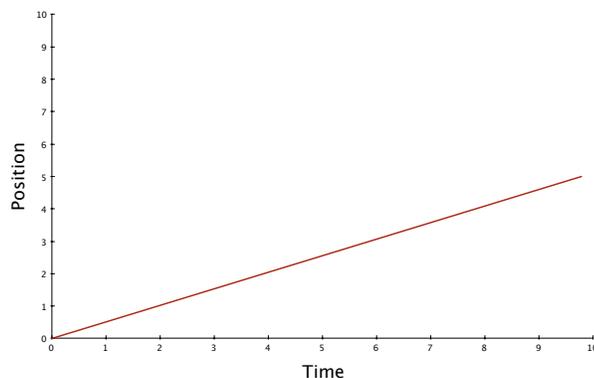
constant positive acceleration



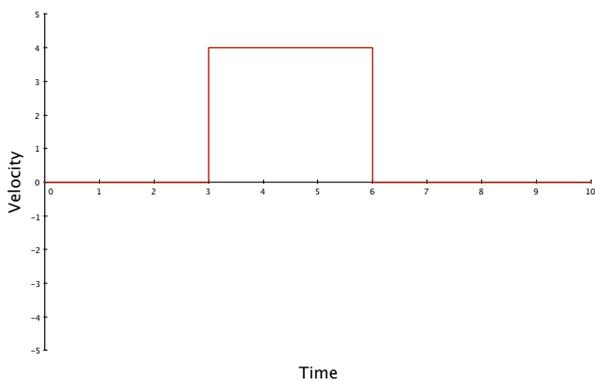
constant negative acceleration



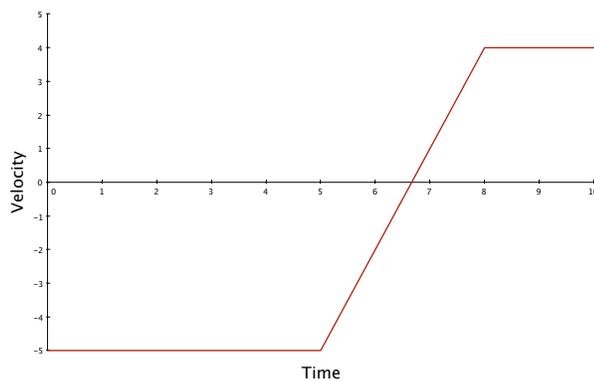
constant positive velocity, then constant negative acceleration until at rest



*constant positive velocity
uniform motion (forward)*

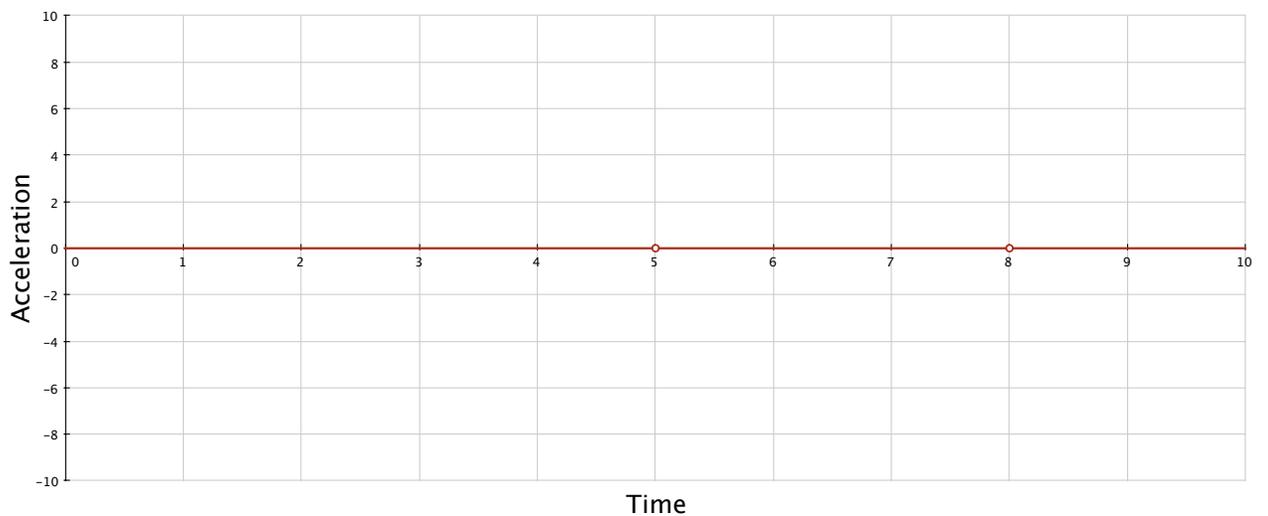
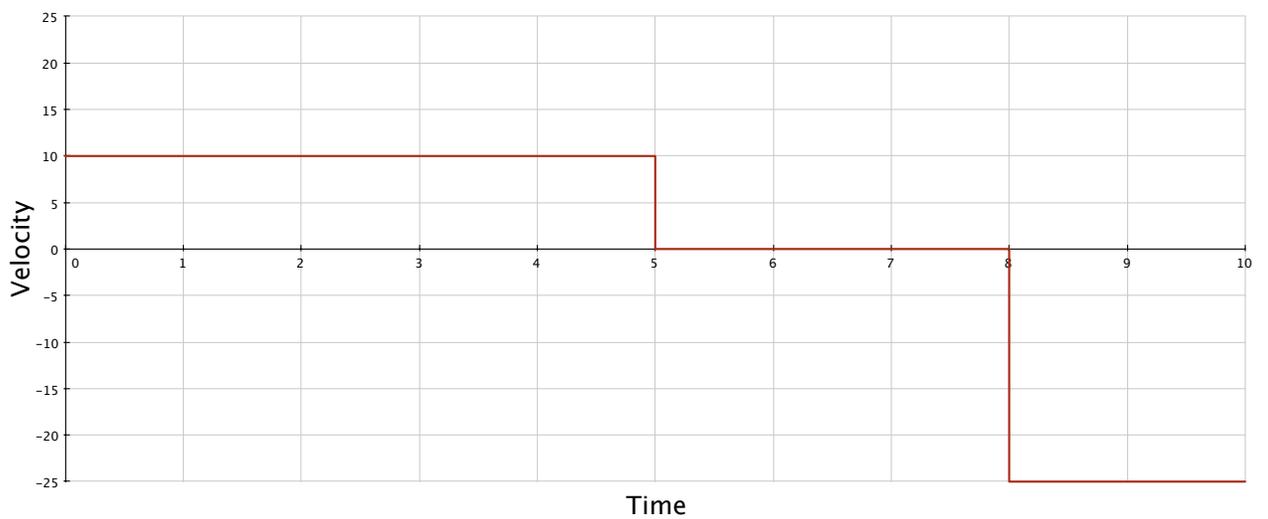
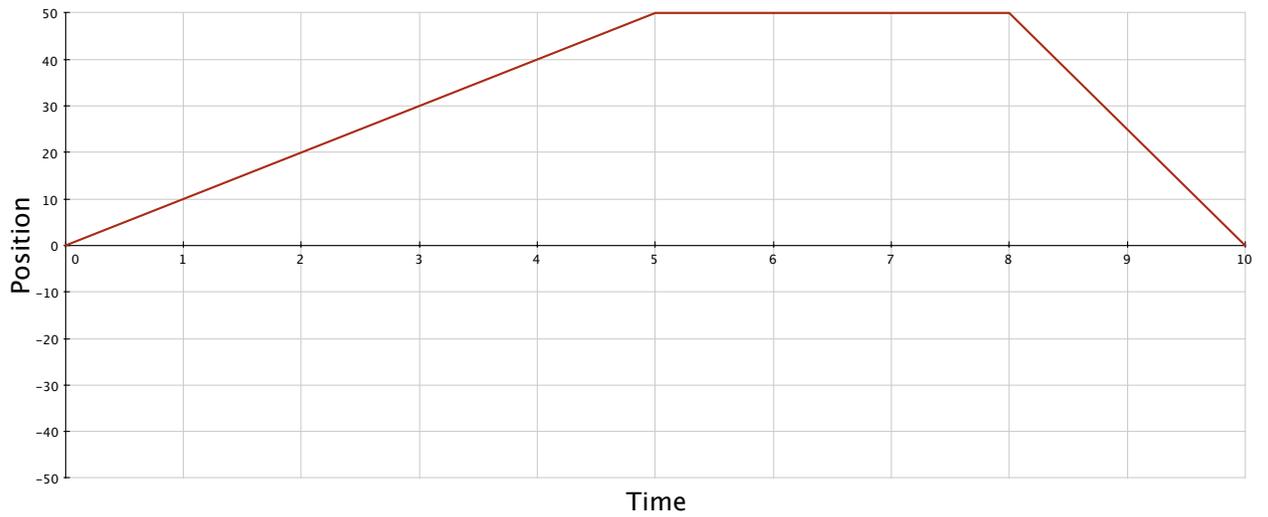


at rest, constant positive velocity, then at rest

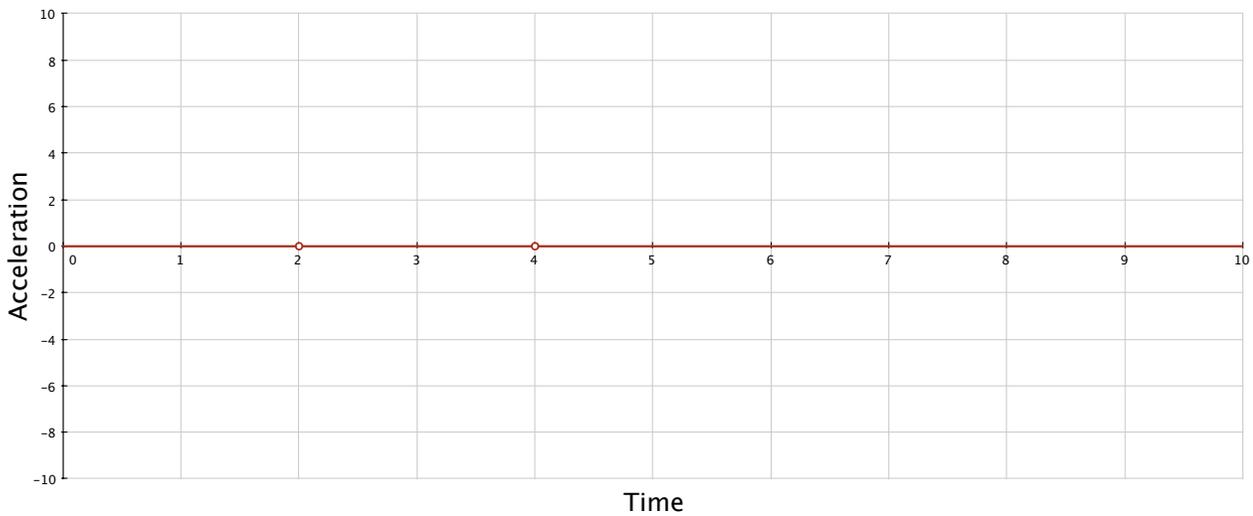
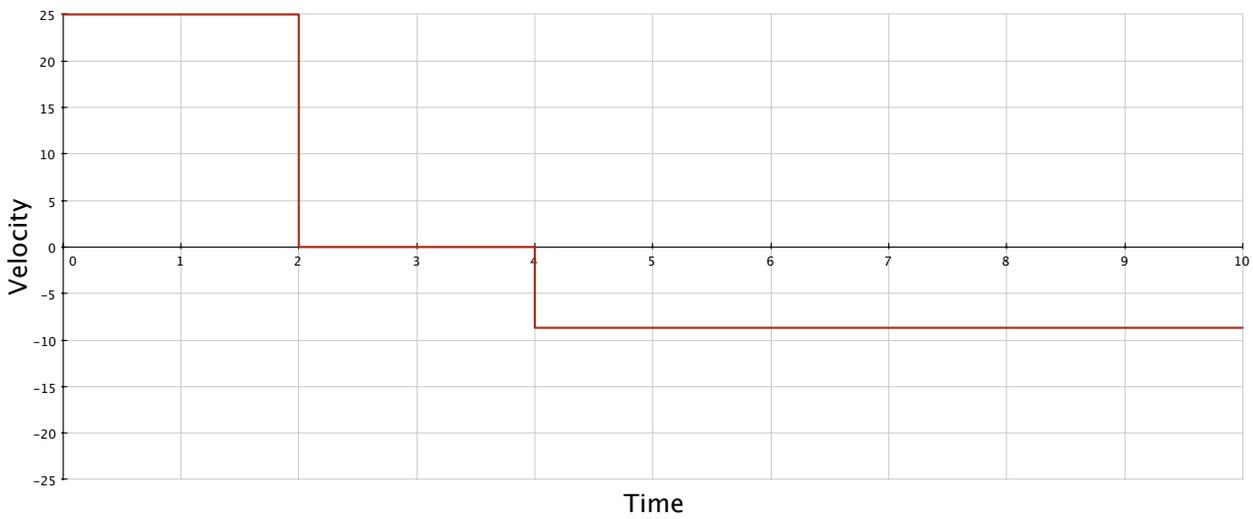
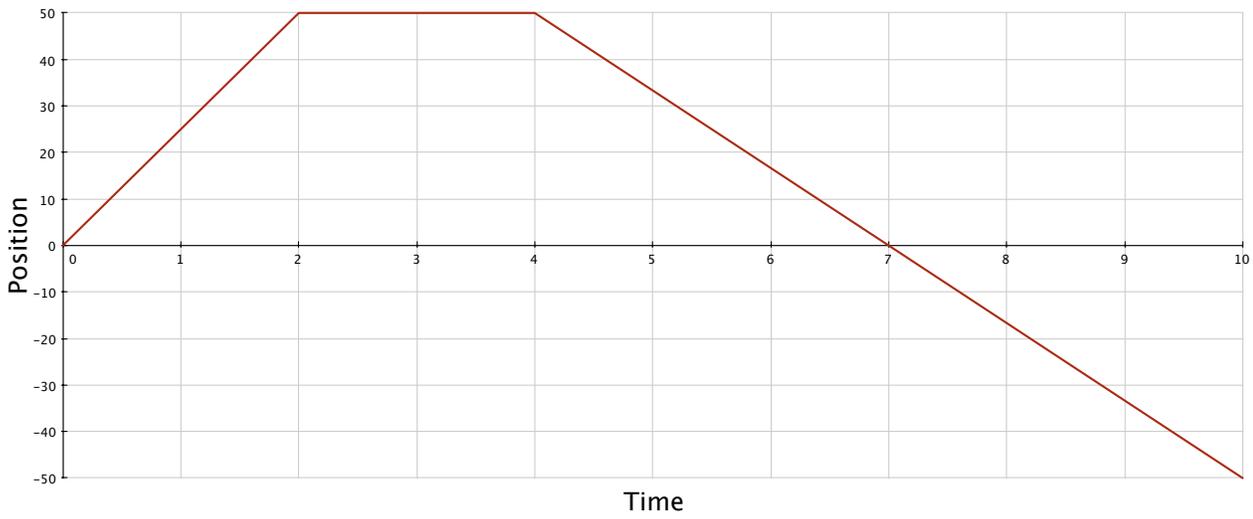


constant negative velocity, constant positive acceleration, then constant positive velocity

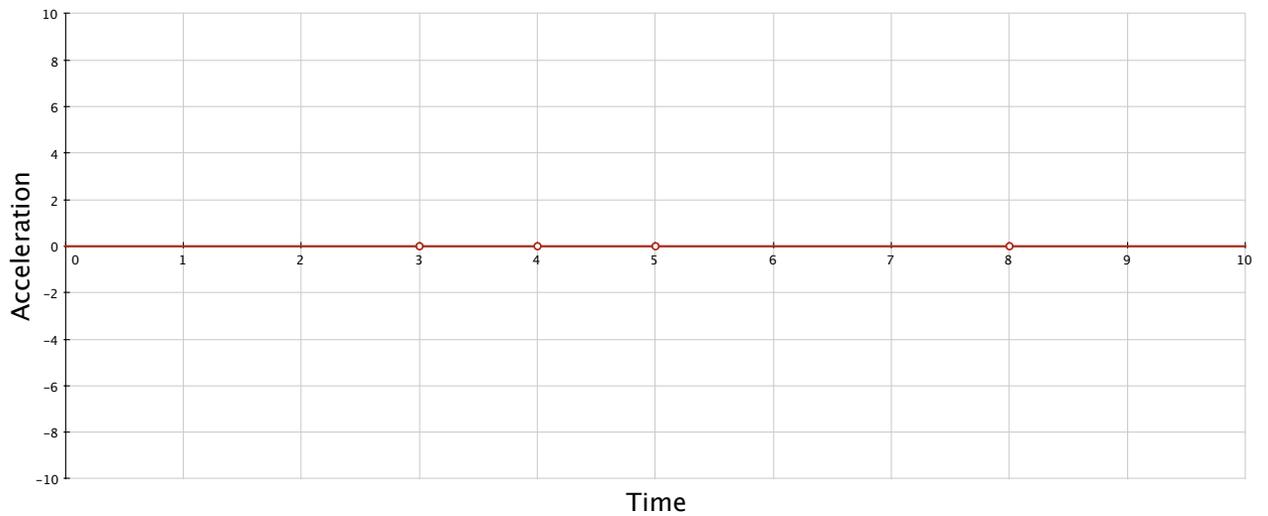
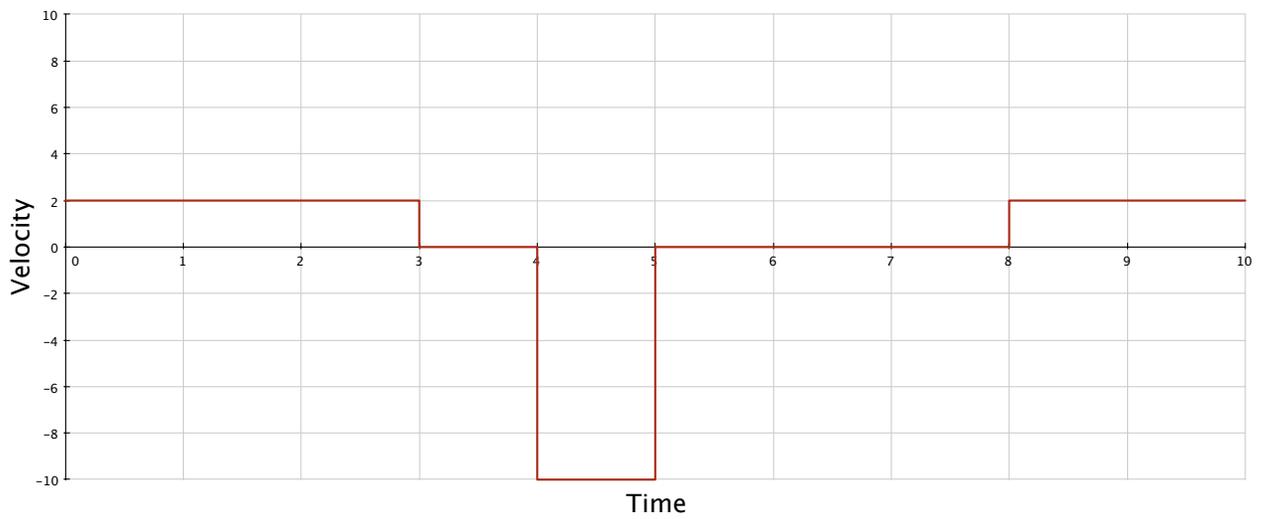
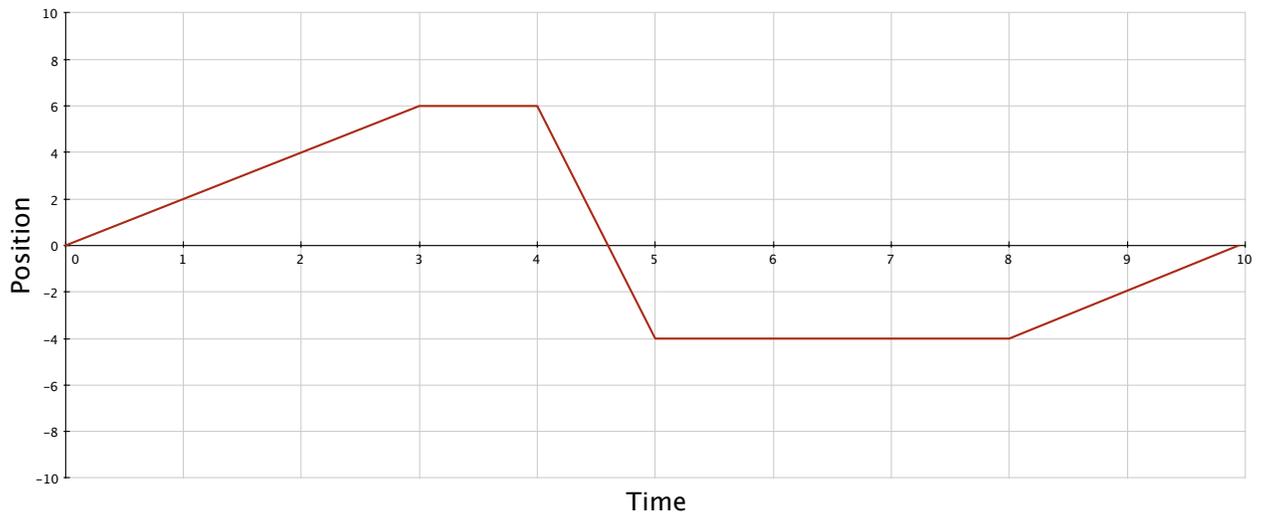
Sketch the missing motion graphs. Pay particular attention to shape and inflection points. Change the values of the vertical axis if necessary.



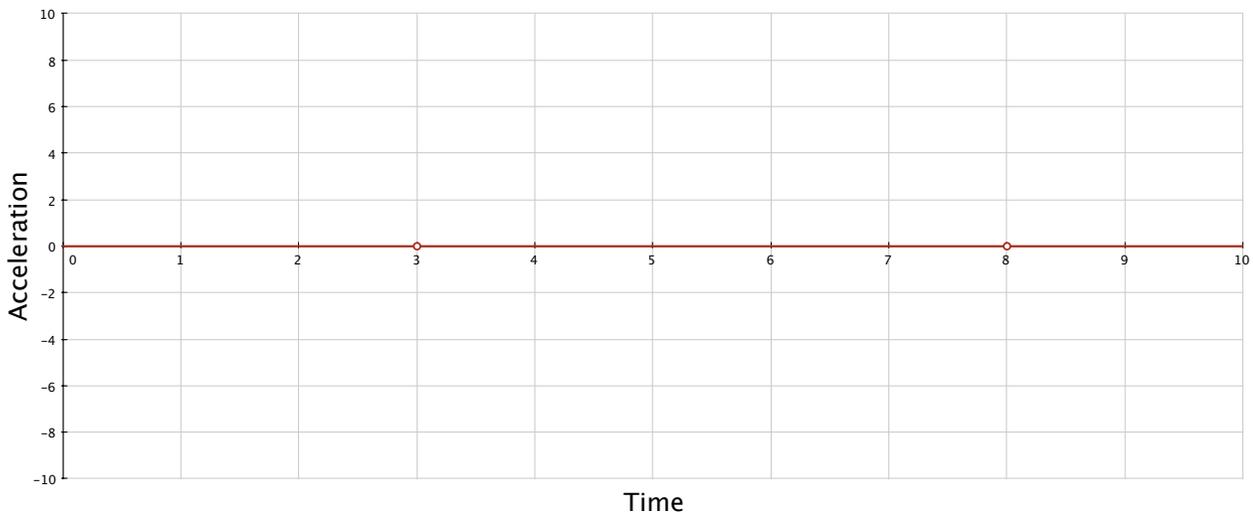
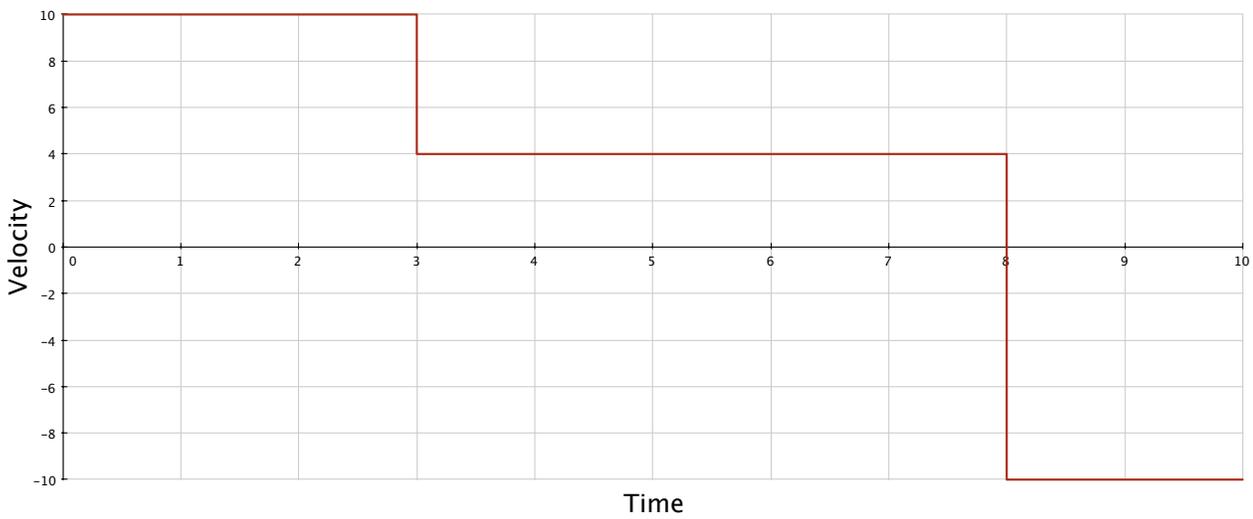
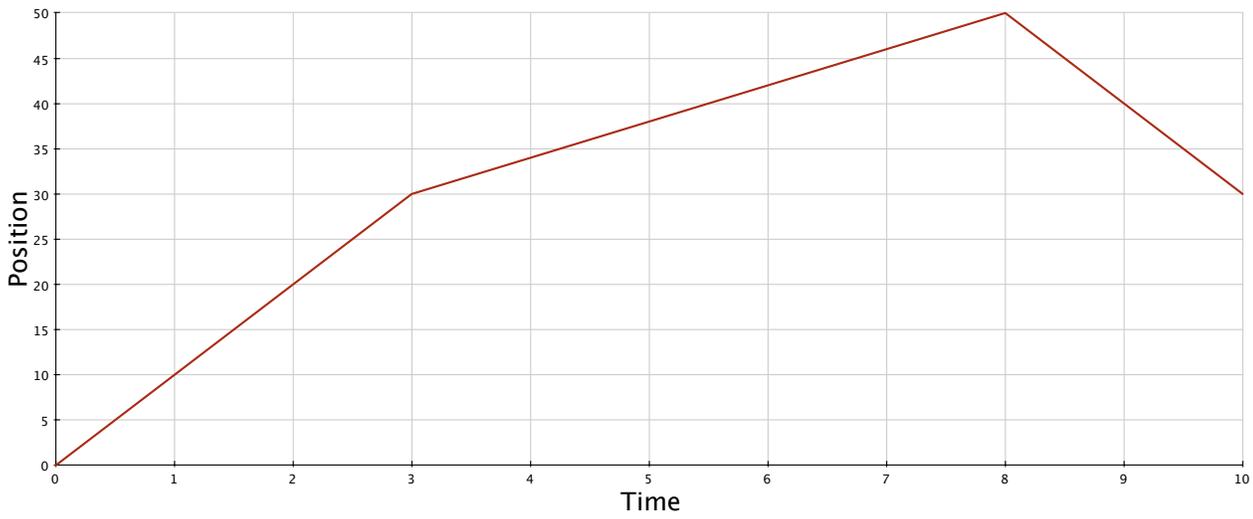
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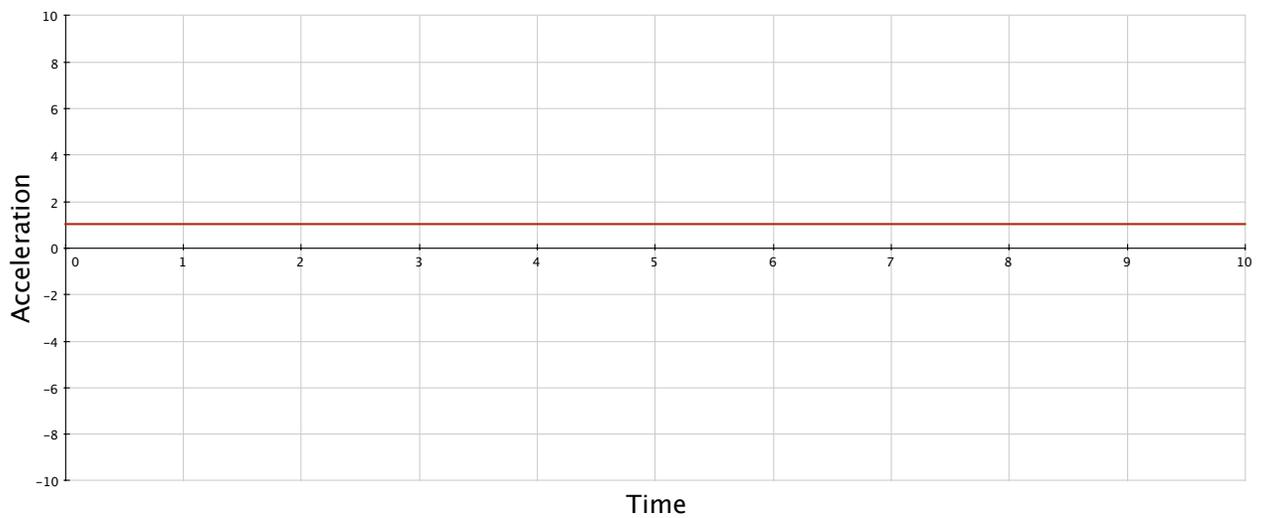
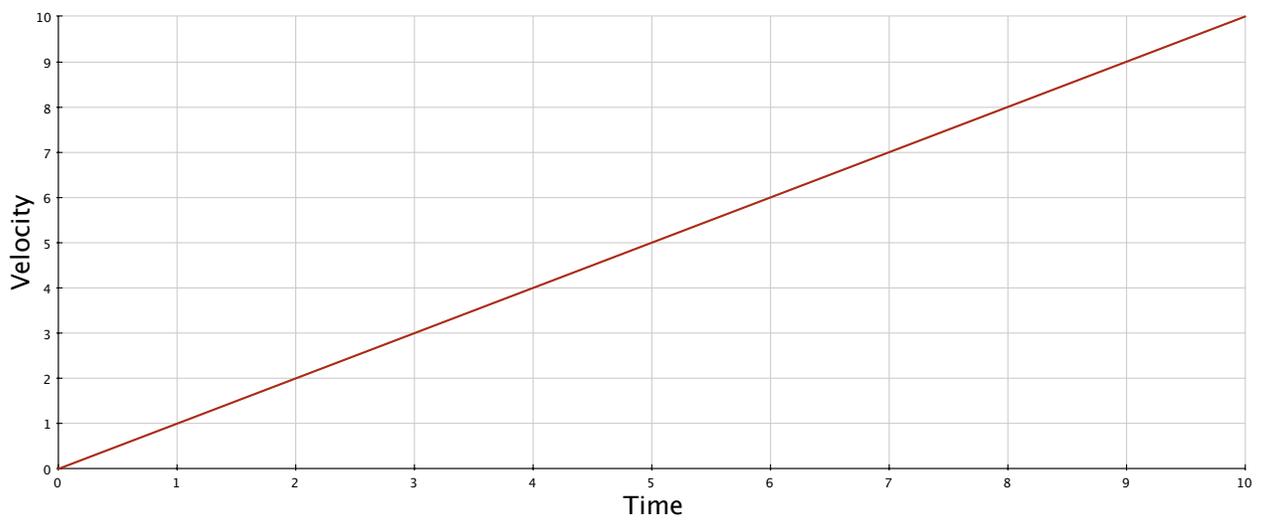
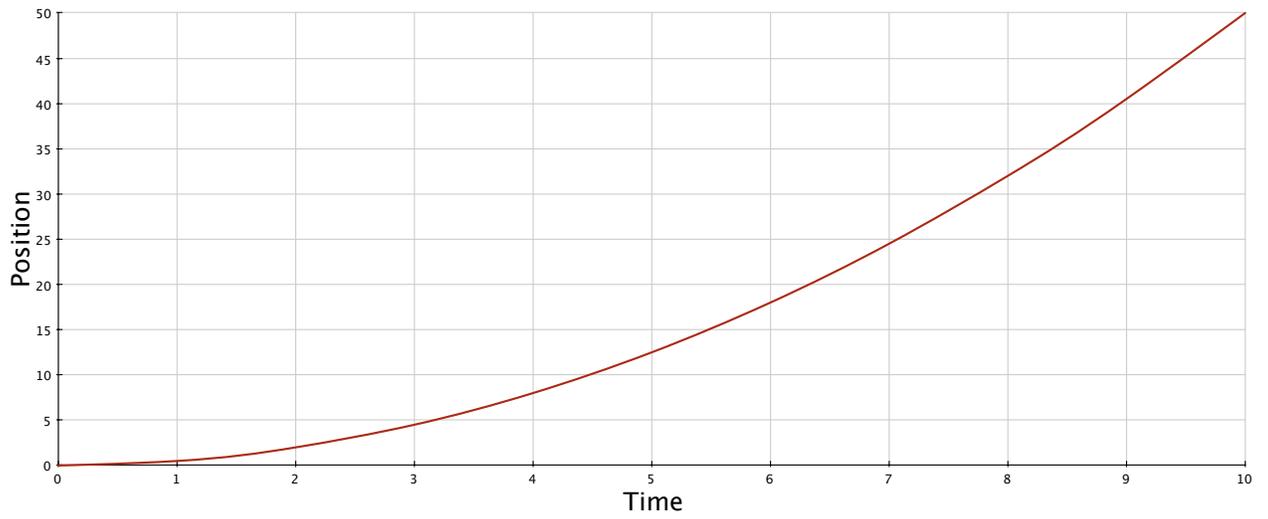
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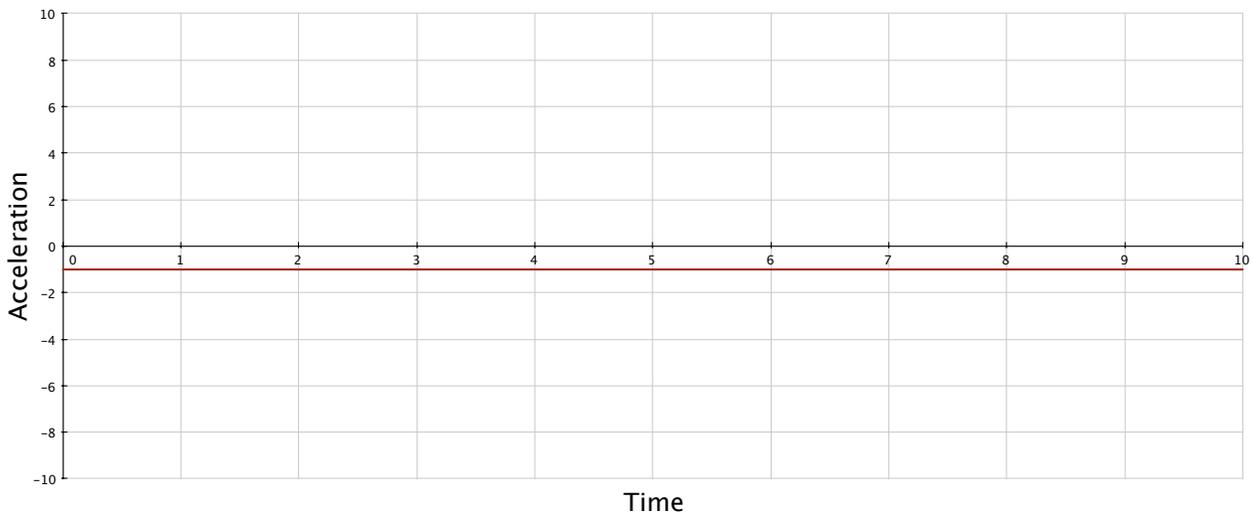
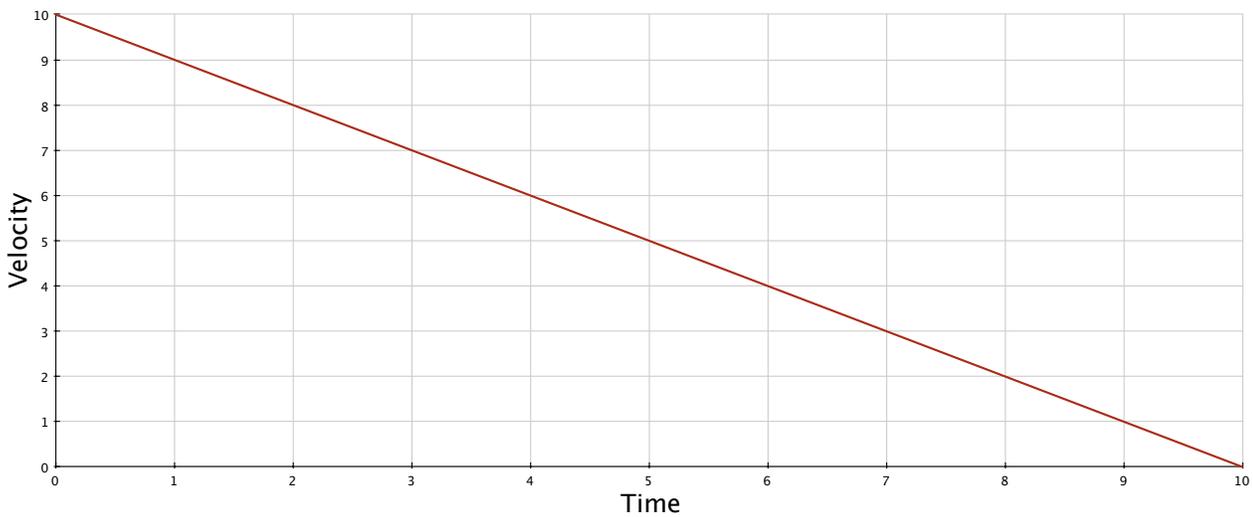
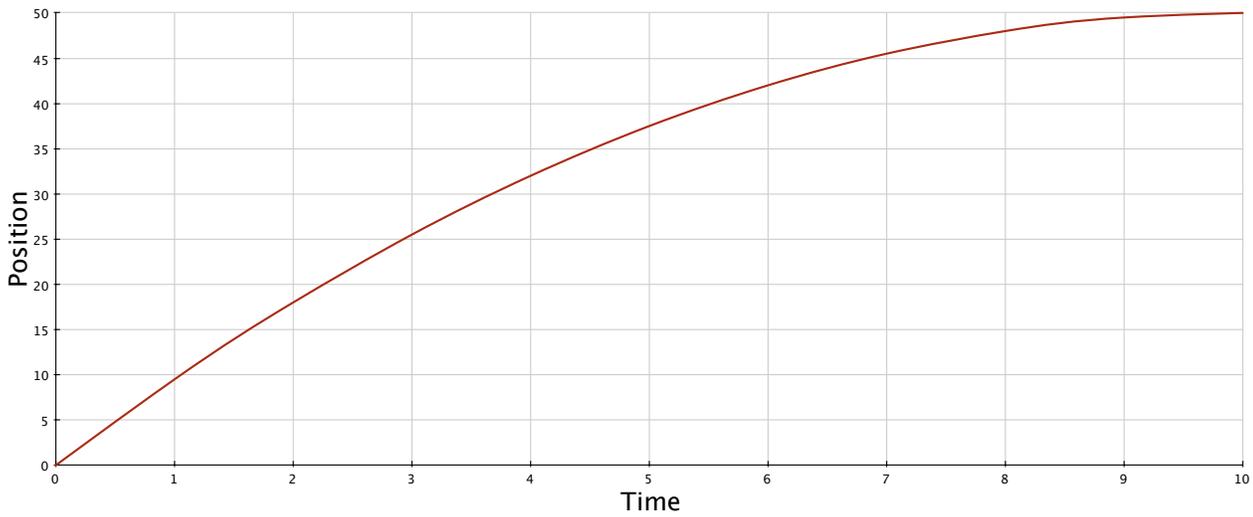
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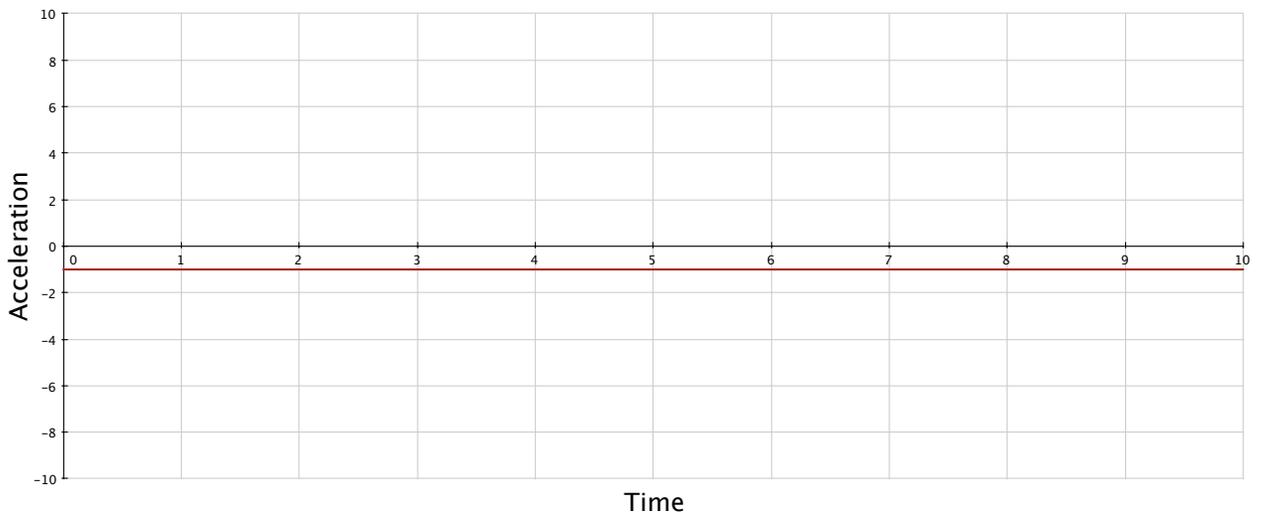
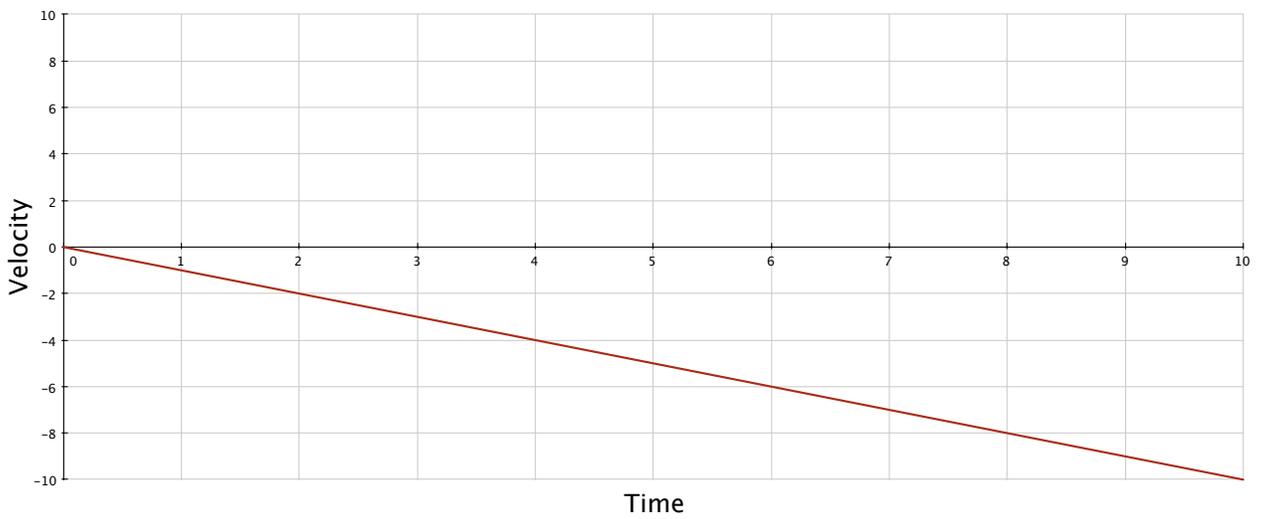
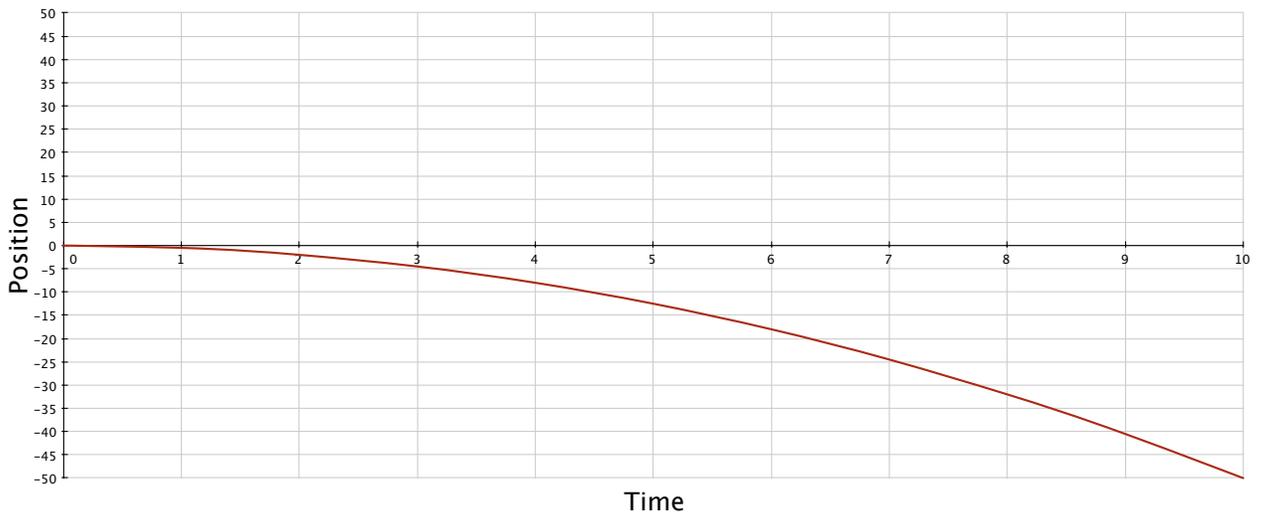
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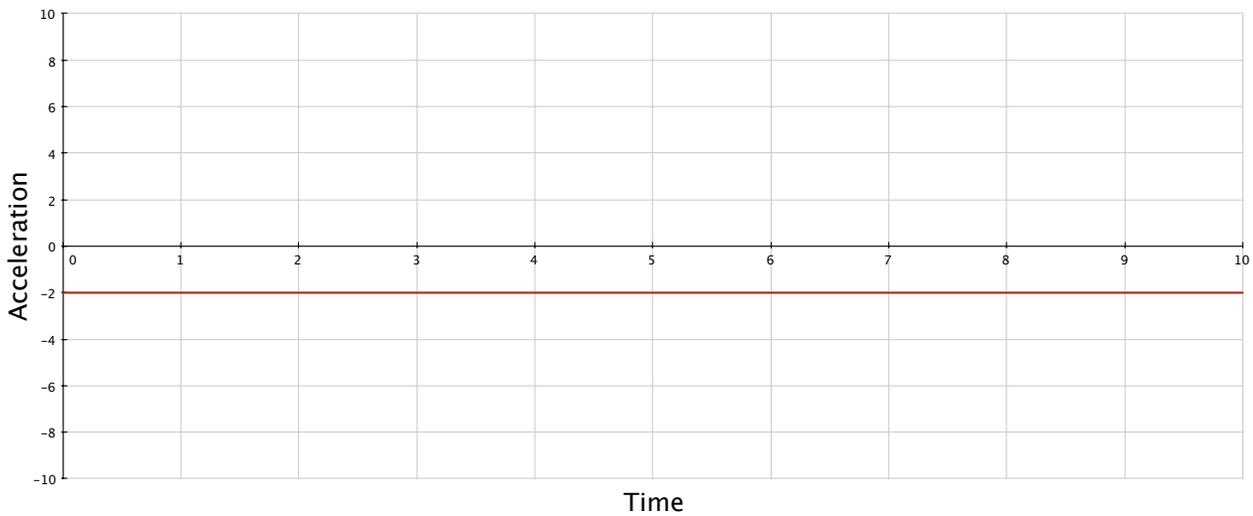
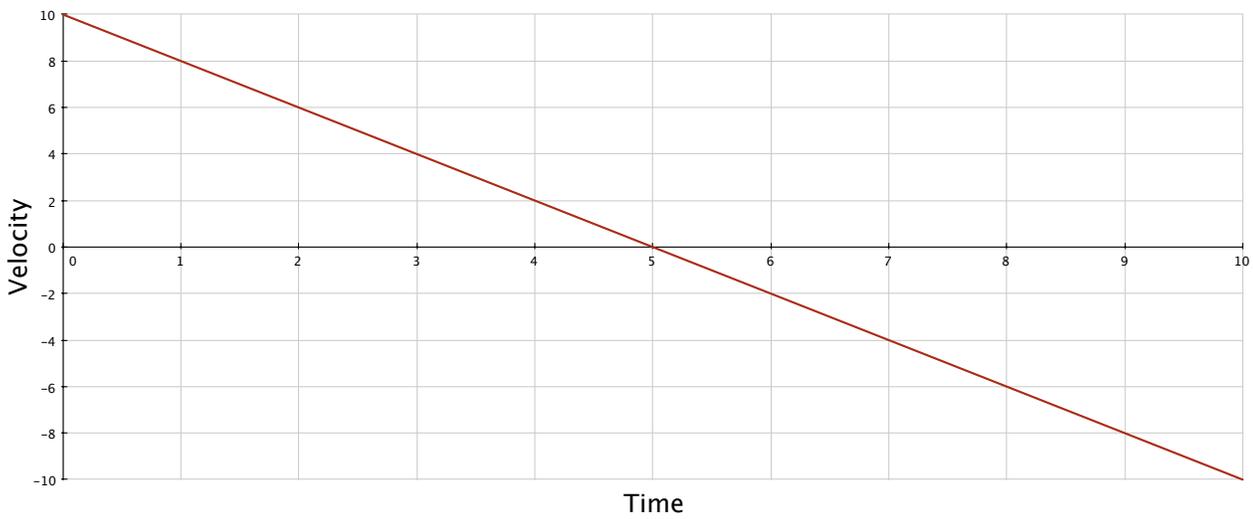
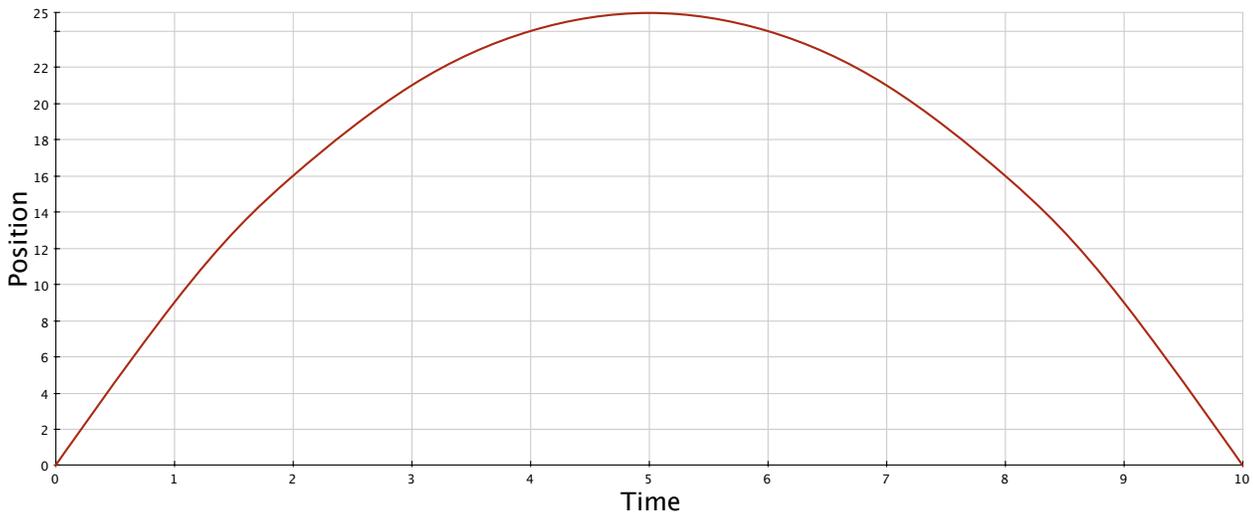
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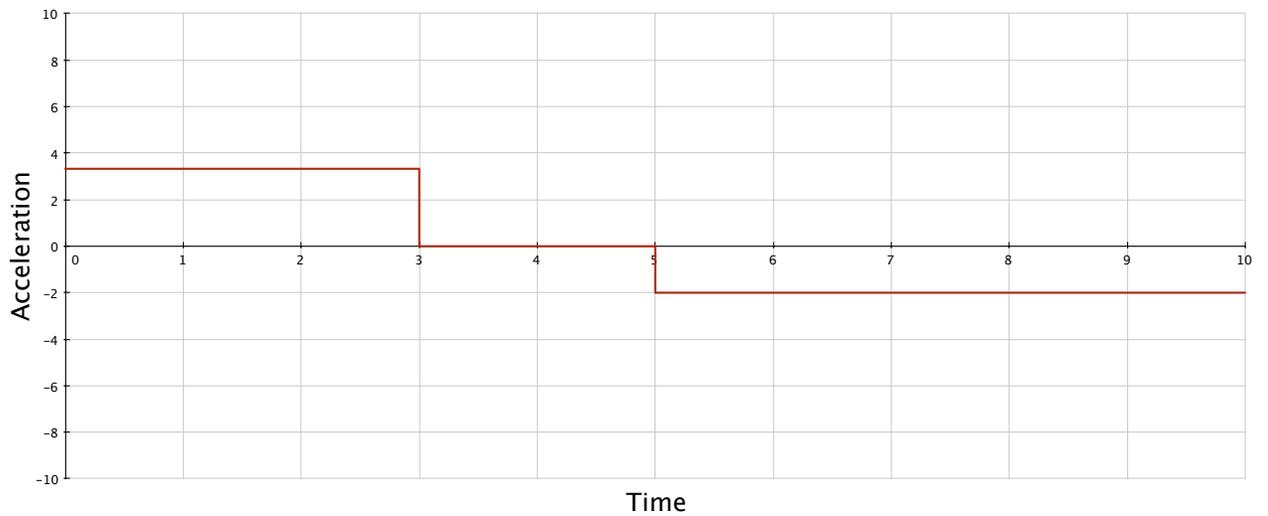
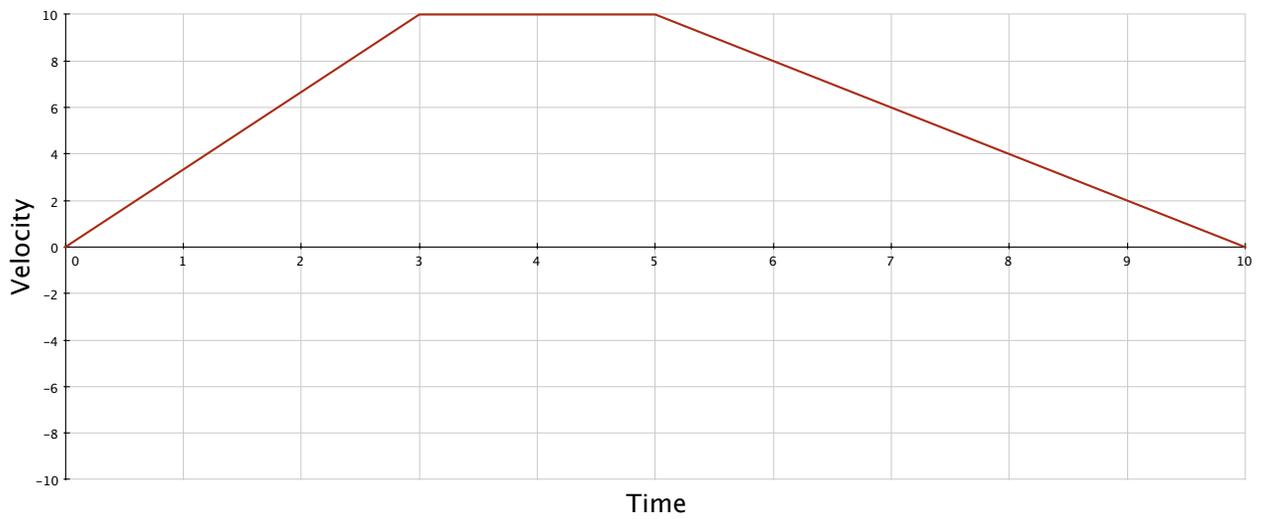
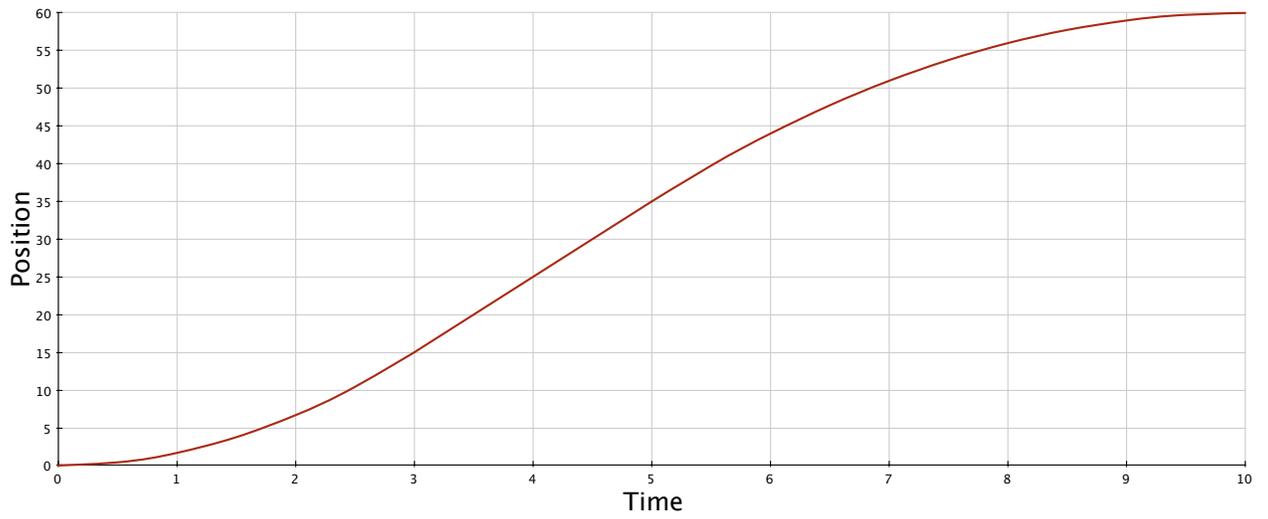
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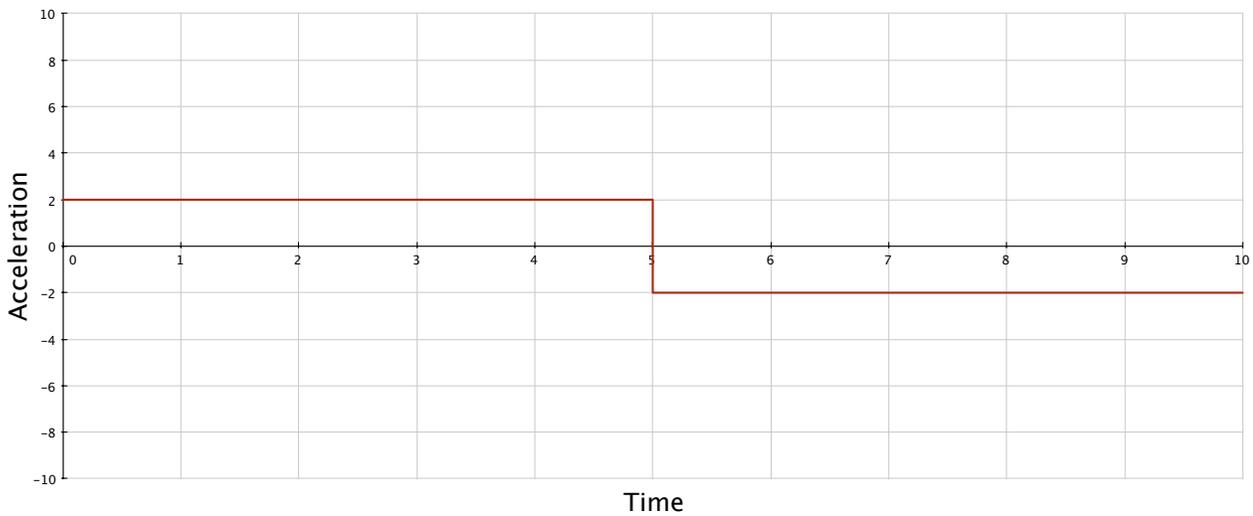
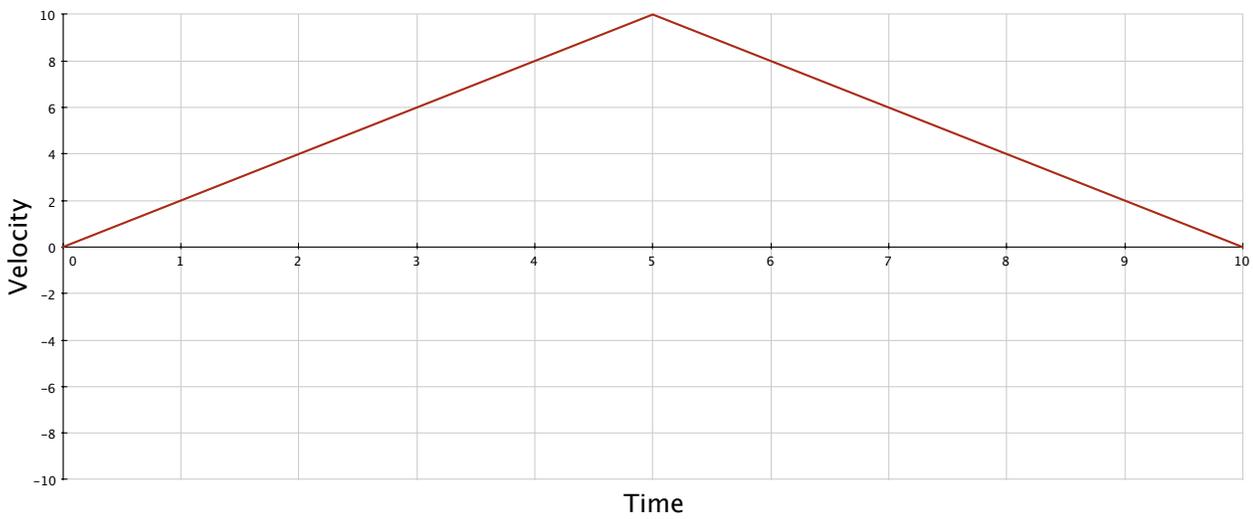
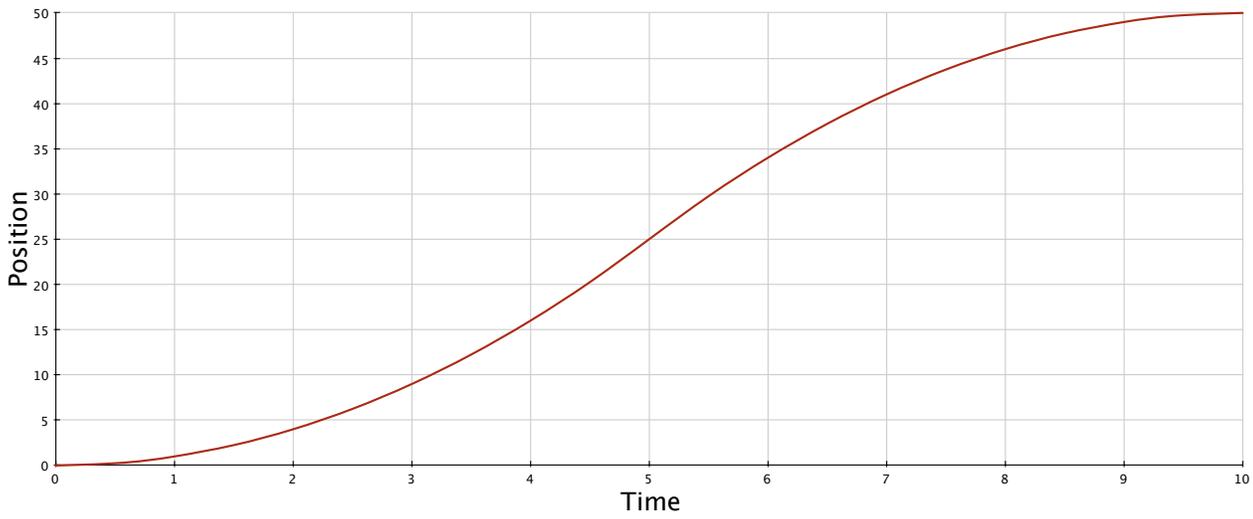
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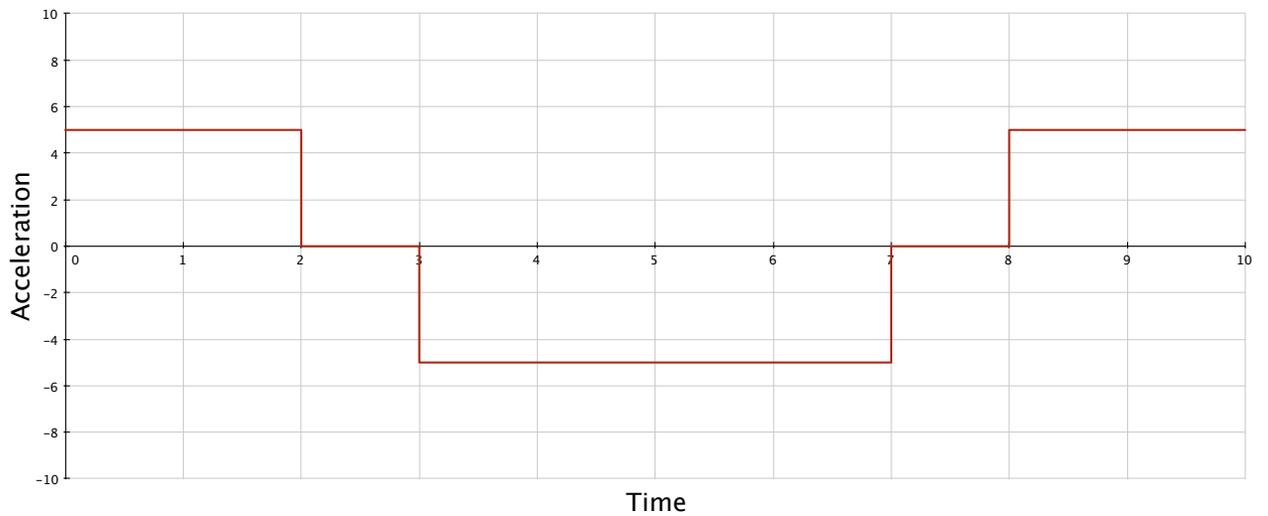
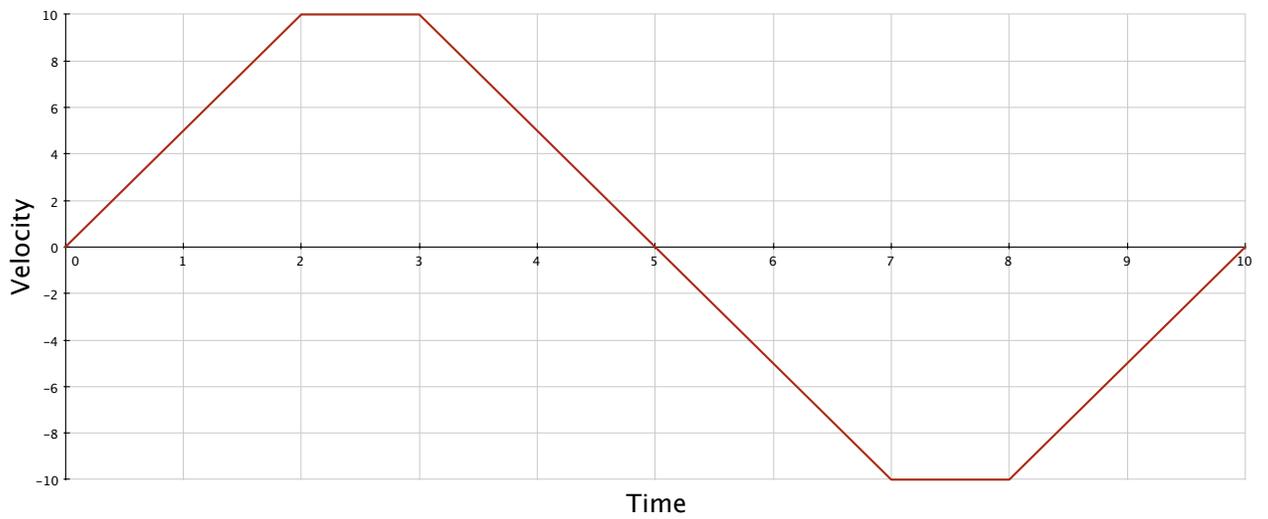
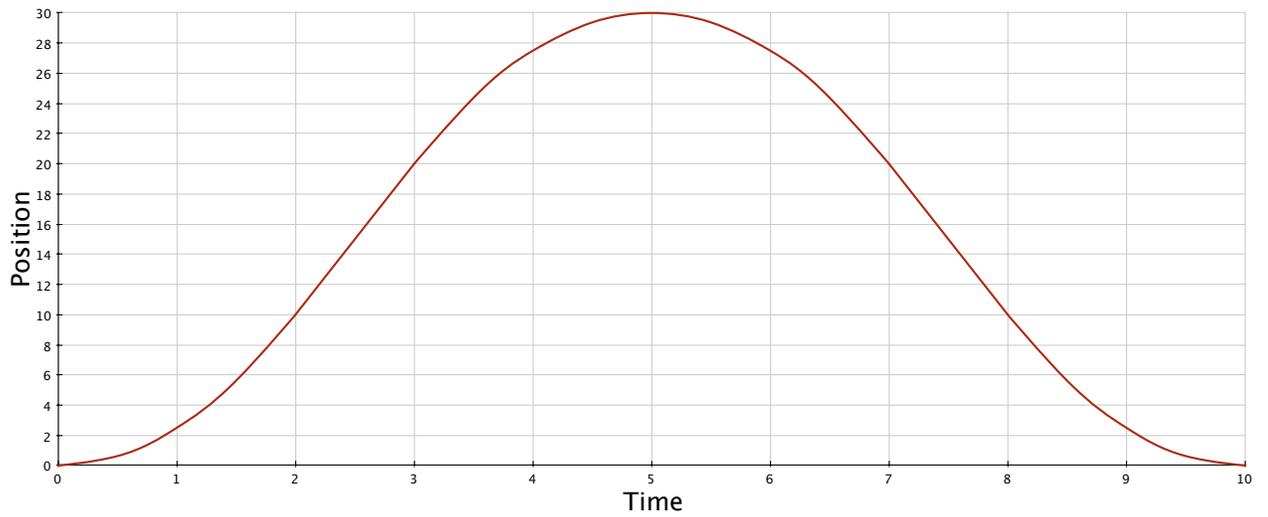
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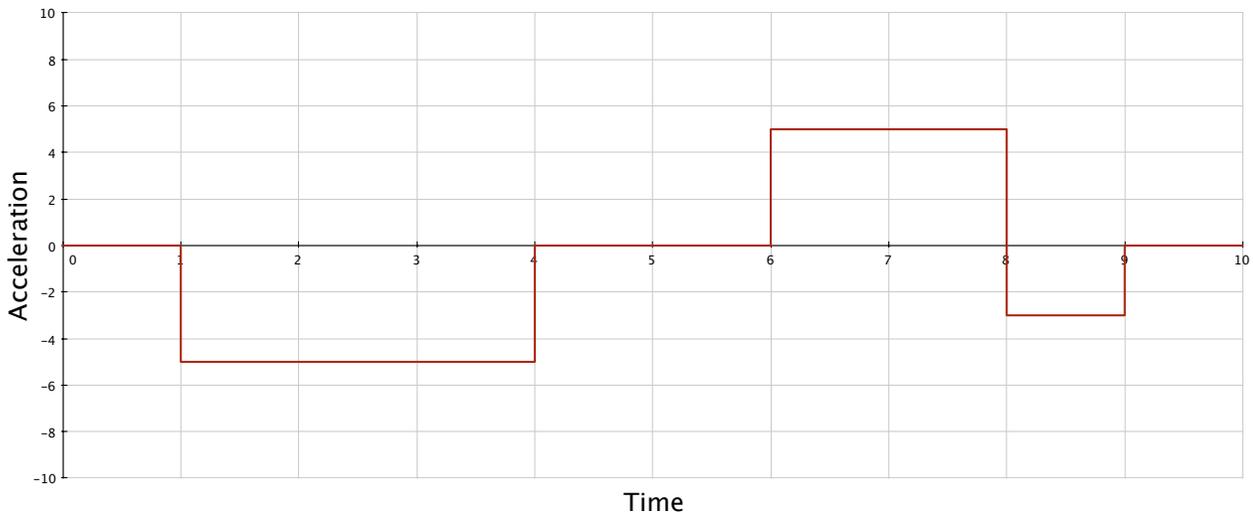
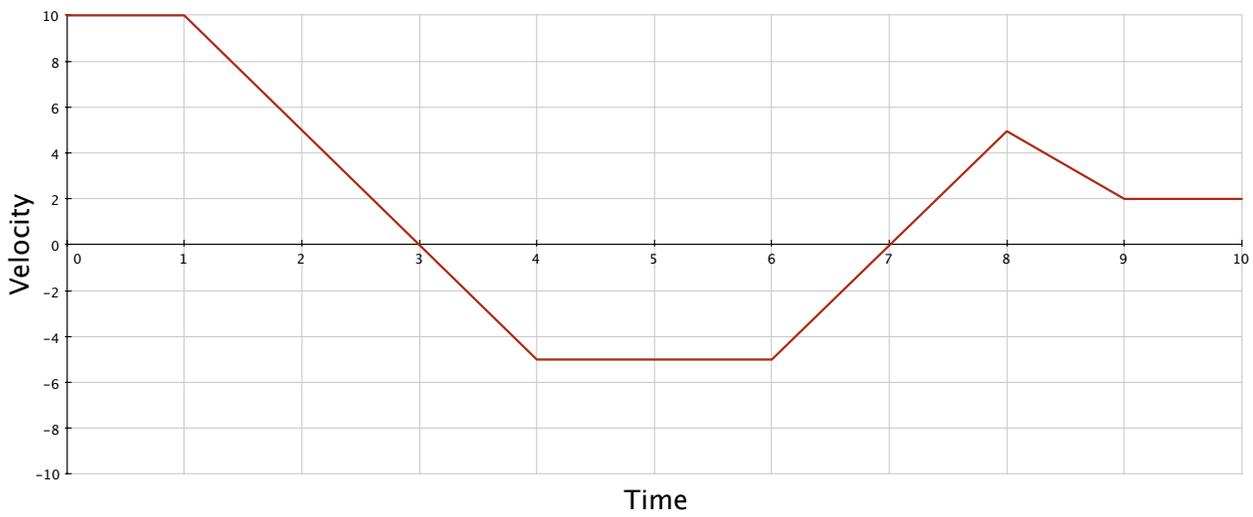
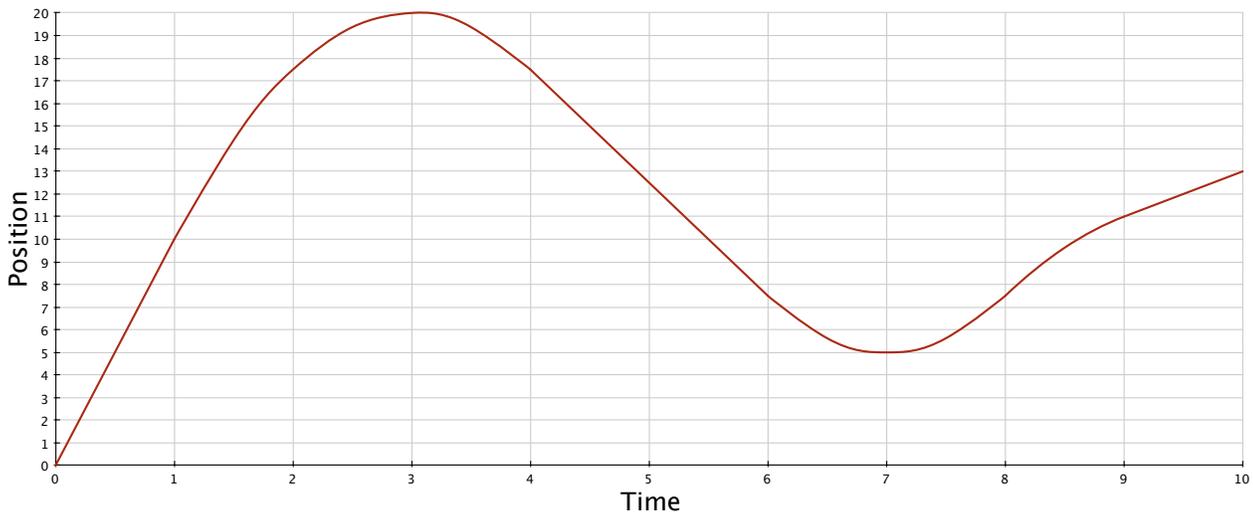
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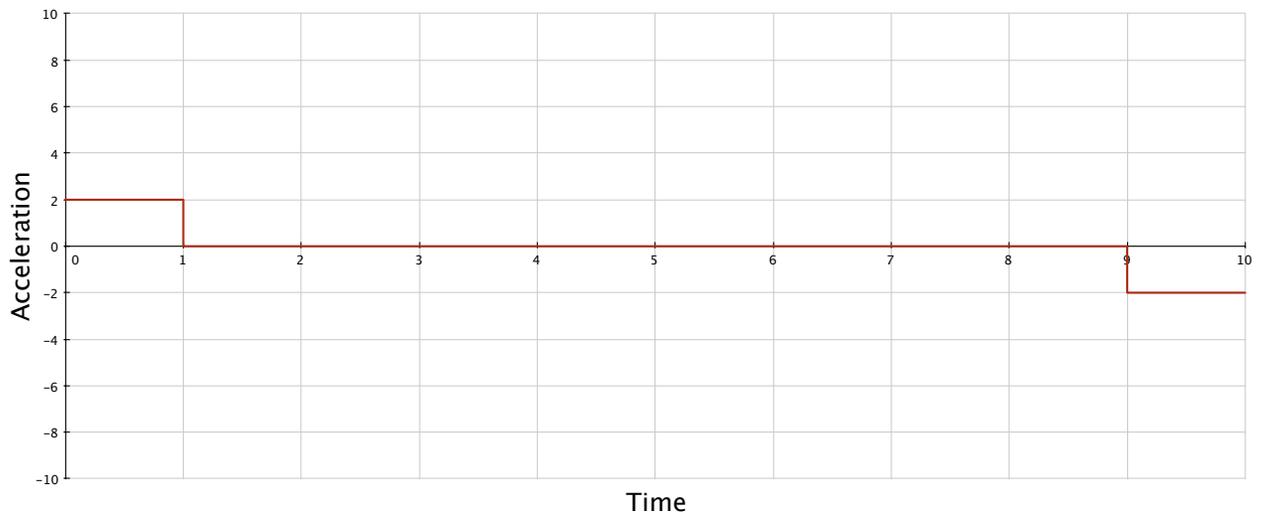
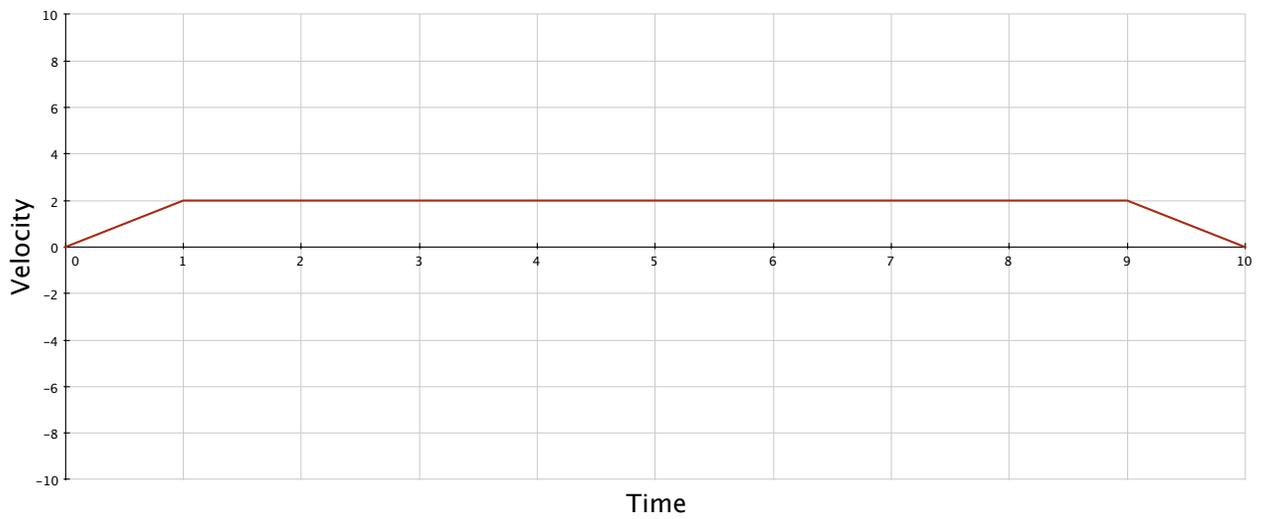
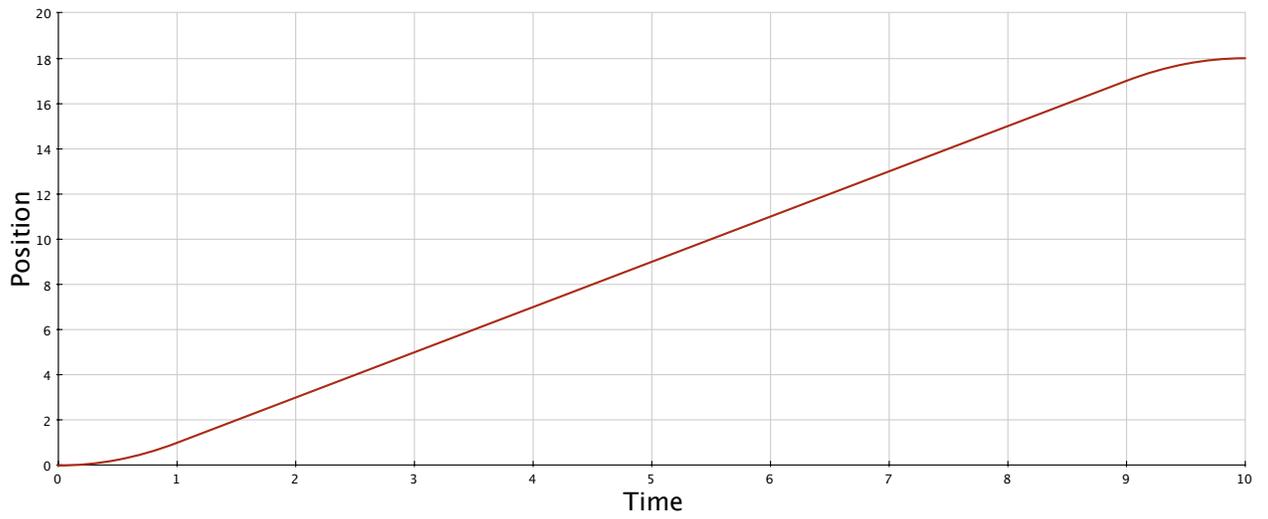
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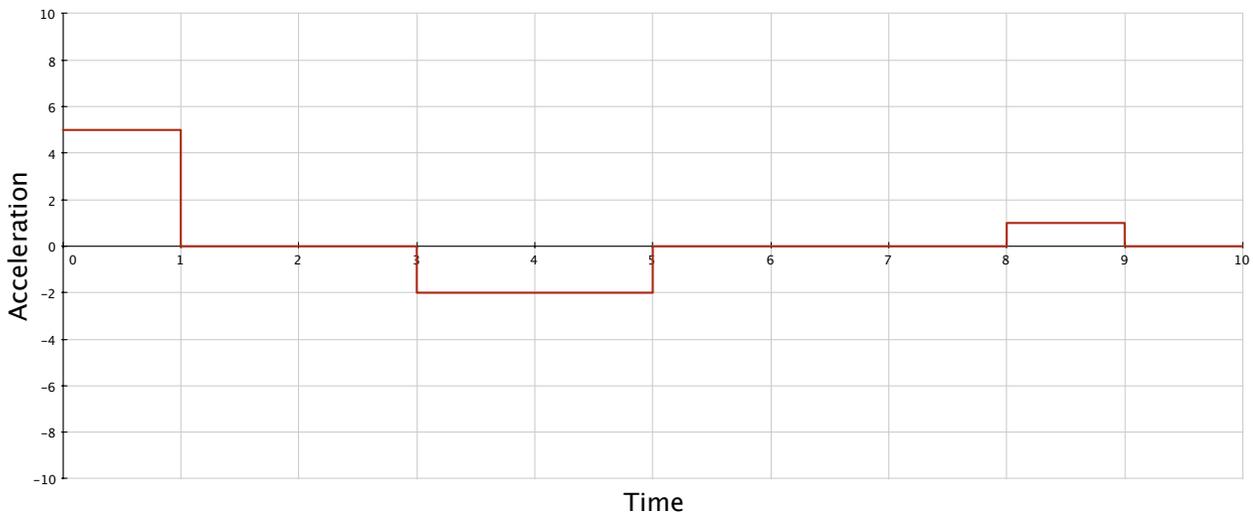
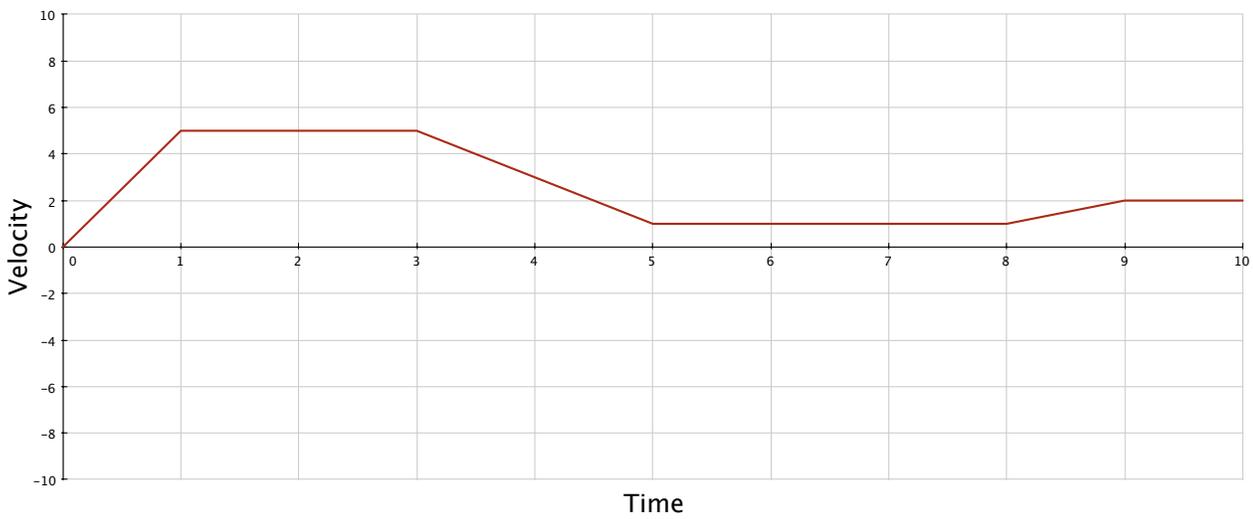
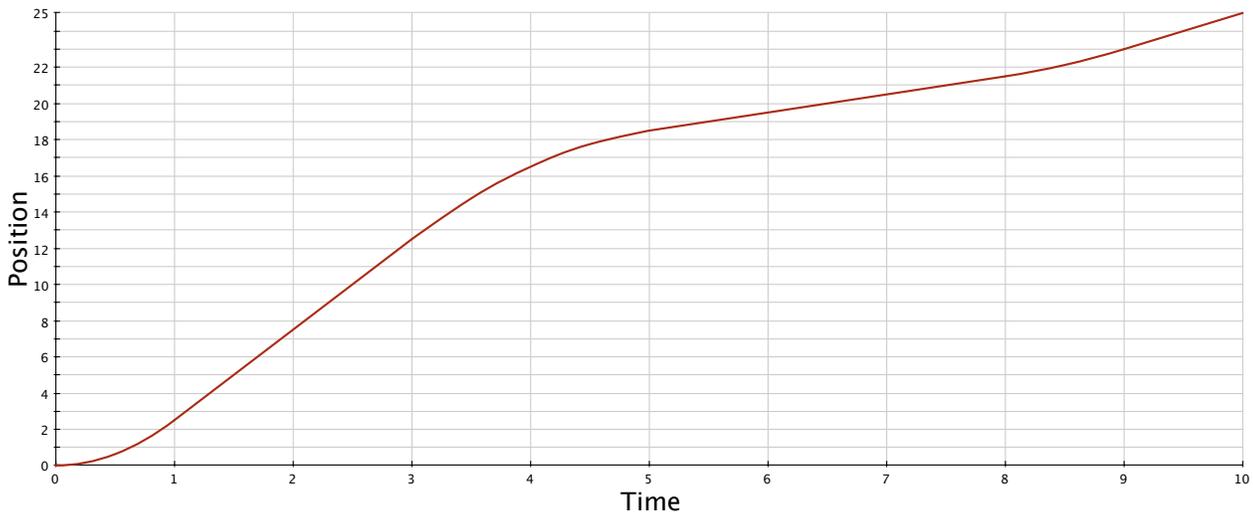
Sketch the missing motion graphs. Pay particular attention to shape and inflection points. Change the values of the vertical axis if necessary.



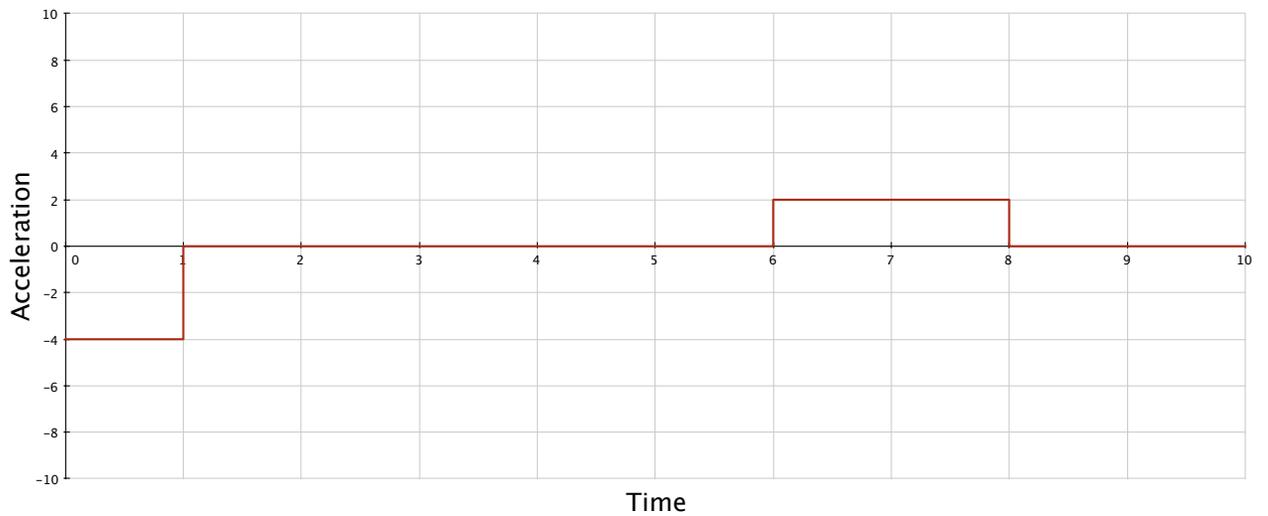
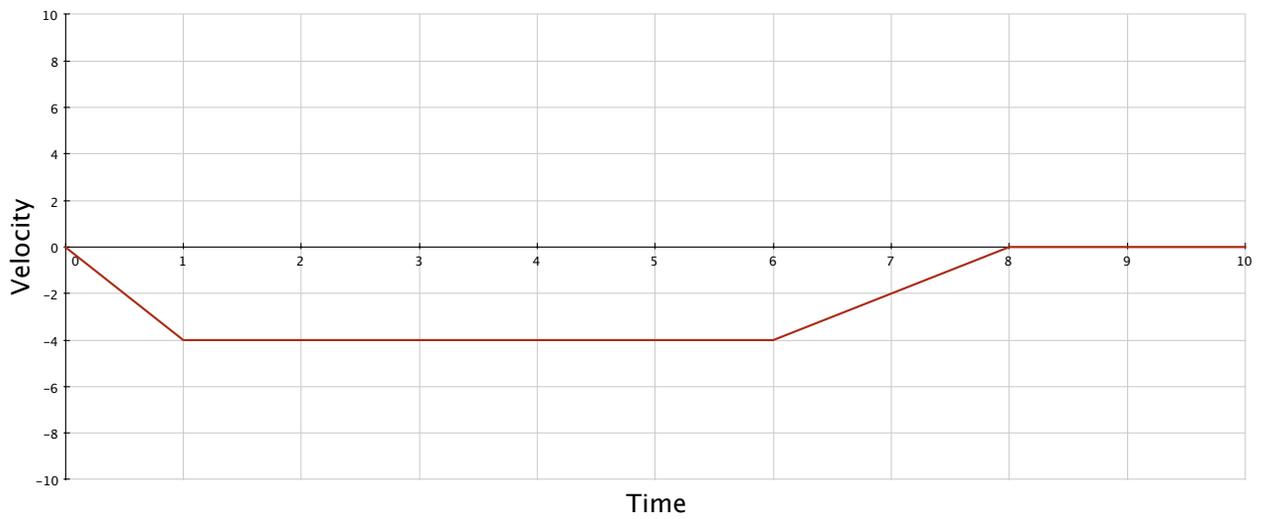
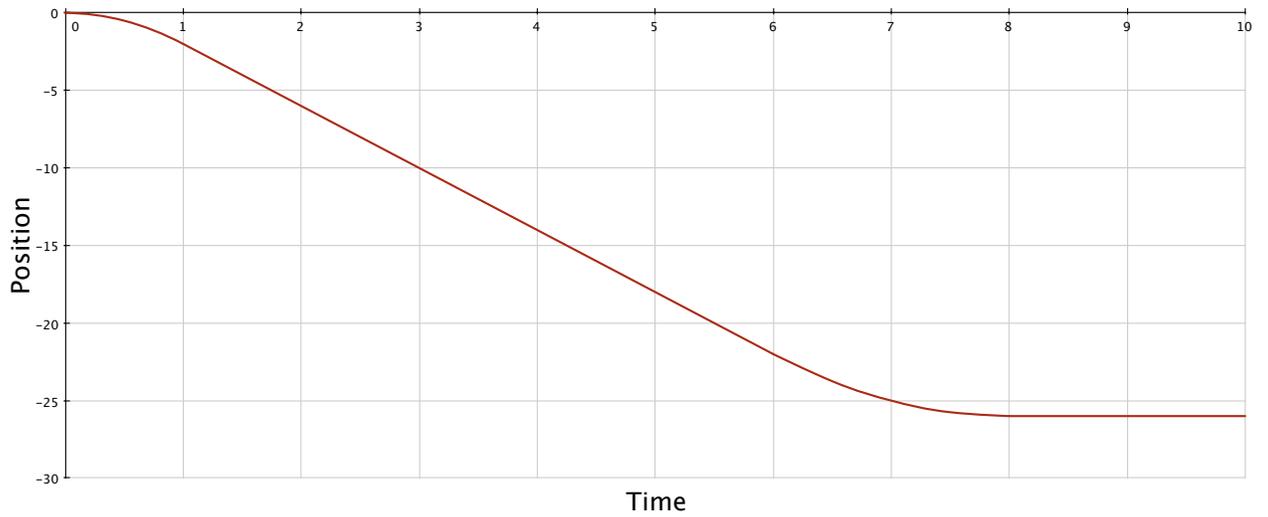
Sketch the missing motion graphs. Pay particular attention to shape and inflection points. Change the values of the vertical axis if necessary.



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