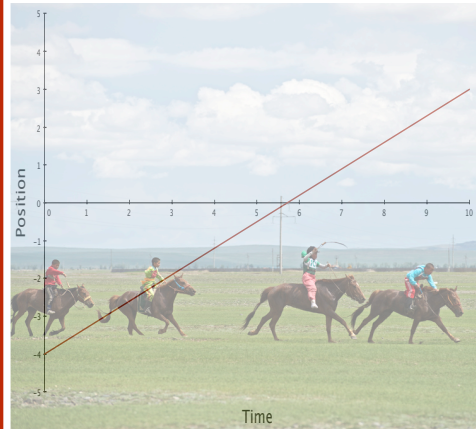
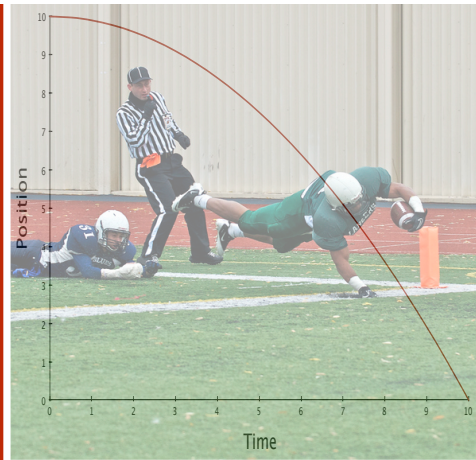


Motion Graphs

Kinematics Unit



Quizzes and Solutions

By Robert Prior

Interpreting and sketching motion graphs is an important part of kinematics.

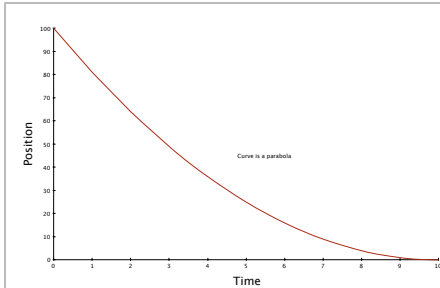
These short quizzes will let you quickly assess which skills your students have mastered, and where they need more help.

Inside

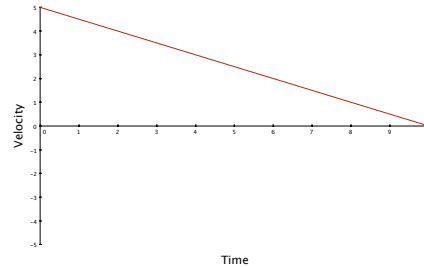
- | | |
|---|-----------|
| Simple Motion
Multiple choice quizzes of graphs depicting simple motion. | 2 |
| Complex Motion
Graphs showing several types of motion; students describe each section. | 6 |
| Sketching Graphs
Given a position-time or velocity-time graph, students sketch the other motion graphs. | 10 |

Motion Graph Quiz

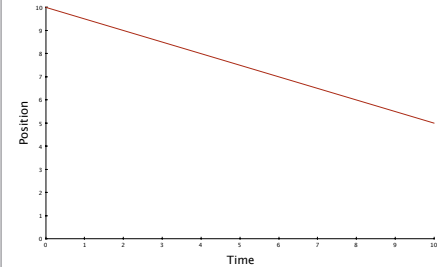
For each of the following motion graphs, indicate the **best description** of the motion.



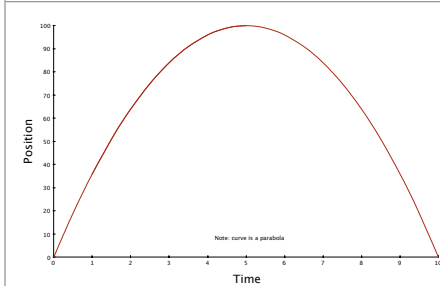
- at rest
 constant positive velocity
 constant negative velocity
 constant positive acceleration
 constant negative acceleration



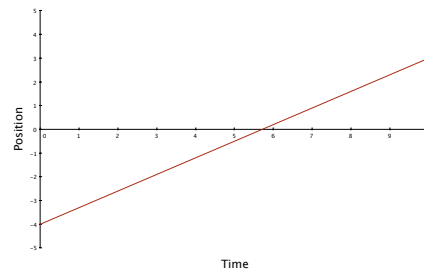
- at rest
 constant positive velocity
 constant negative velocity
 constant positive acceleration
 constant negative acceleration



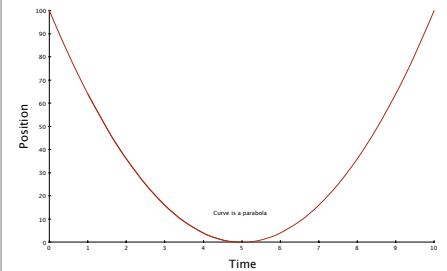
- at rest
 constant positive velocity
 constant negative velocity
 constant positive acceleration
 constant negative acceleration



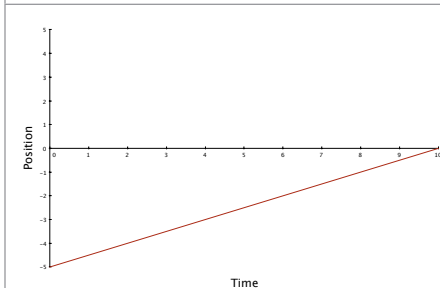
- at rest
 constant positive velocity
 constant negative velocity
 constant positive acceleration
 constant negative acceleration



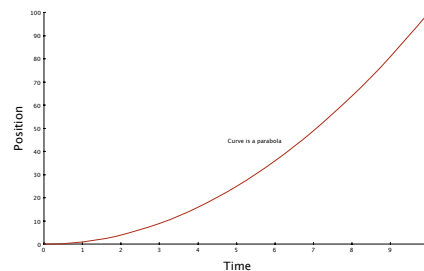
- at rest
 constant positive velocity
 constant negative velocity
 constant positive acceleration
 constant negative acceleration



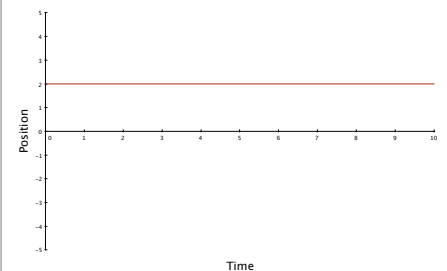
- at rest
 constant positive velocity
 constant negative velocity
 constant positive acceleration
 constant negative acceleration



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



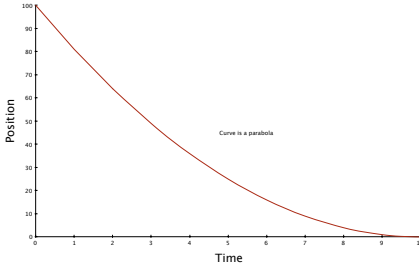
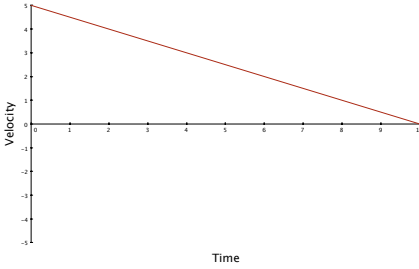
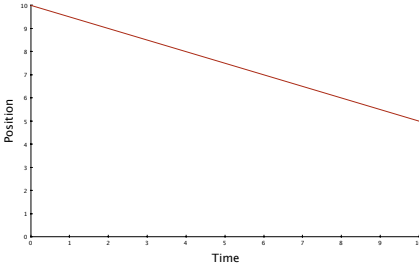
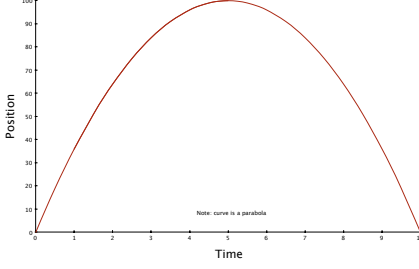
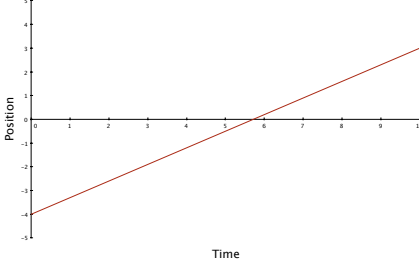
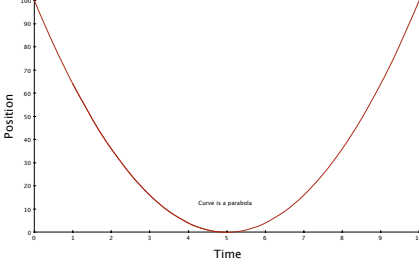
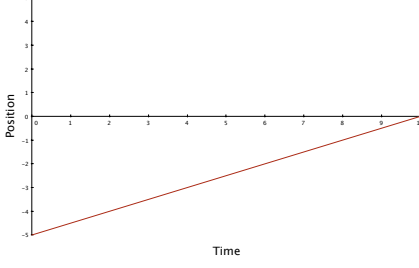
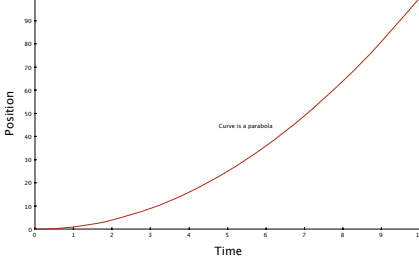
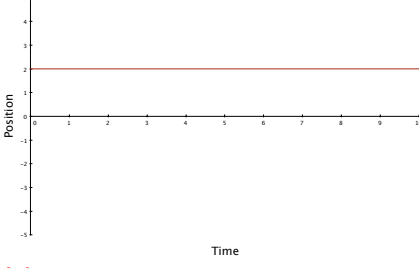
- at rest
 constant positive velocity
 constant negative velocity
 constant positive acceleration
 constant negative acceleration



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

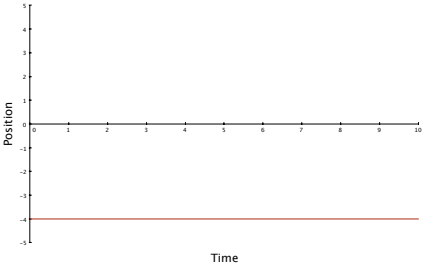
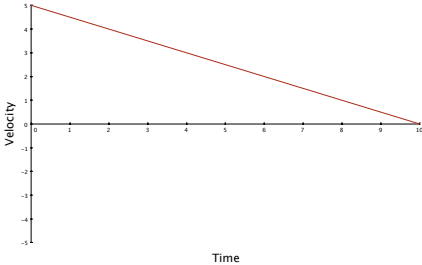
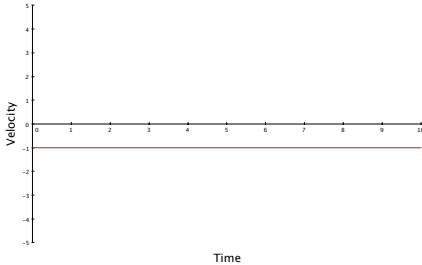
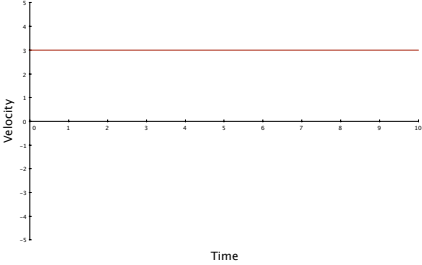
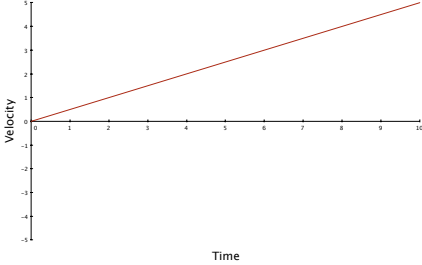
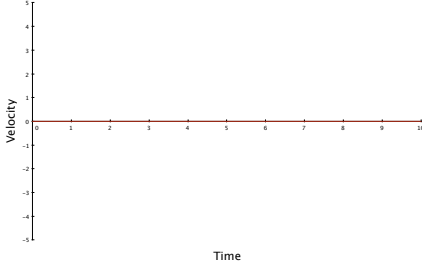
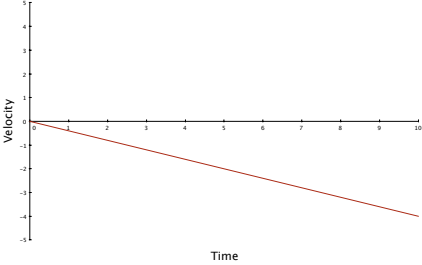
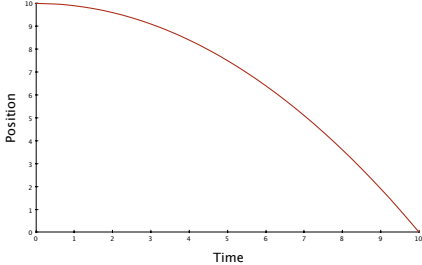
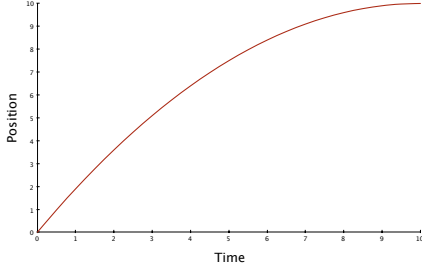
Motion Graph Quiz

For each of the following motion graphs, indicate the **best description** of the motion.

 <p><input type="checkbox"/> at rest <input type="checkbox"/> constant positive velocity <input type="checkbox"/> constant negative velocity <input checked="" type="checkbox"/> constant positive acceleration <input type="checkbox"/> constant negative acceleration</p>	 <p><input type="checkbox"/> at rest <input type="checkbox"/> constant positive velocity <input type="checkbox"/> constant negative velocity <input type="checkbox"/> constant positive acceleration <input checked="" type="checkbox"/> constant negative acceleration</p>	 <p><input type="checkbox"/> at rest <input type="checkbox"/> constant positive velocity <input checked="" type="checkbox"/> constant negative velocity <input type="checkbox"/> constant positive acceleration <input type="checkbox"/> constant negative acceleration</p>
 <p><input type="checkbox"/> at rest <input type="checkbox"/> constant positive velocity <input type="checkbox"/> constant negative velocity <input type="checkbox"/> constant positive acceleration <input checked="" type="checkbox"/> constant negative acceleration</p>	 <p><input type="checkbox"/> at rest <input checked="" type="checkbox"/> constant positive velocity <input type="checkbox"/> constant negative velocity <input type="checkbox"/> constant positive acceleration <input type="checkbox"/> constant negative acceleration</p>	 <p><input type="checkbox"/> at rest <input type="checkbox"/> constant positive velocity <input type="checkbox"/> constant negative velocity <input checked="" type="checkbox"/> constant positive acceleration <input type="checkbox"/> constant negative acceleration</p>
 <p><input type="checkbox"/> at rest <input checked="" type="checkbox"/> constant positive velocity <input type="checkbox"/> constant negative velocity <input type="checkbox"/> constant positive acceleration <input type="checkbox"/> constant negative acceleration</p>	 <p><input type="checkbox"/> at rest <input type="checkbox"/> constant positive velocity <input type="checkbox"/> constant negative velocity <input checked="" type="checkbox"/> constant positive acceleration <input type="checkbox"/> constant negative acceleration</p>	 <p><input checked="" type="checkbox"/> at rest <input type="checkbox"/> constant positive velocity <input type="checkbox"/> constant negative velocity <input type="checkbox"/> constant positive acceleration <input type="checkbox"/> constant negative acceleration</p>

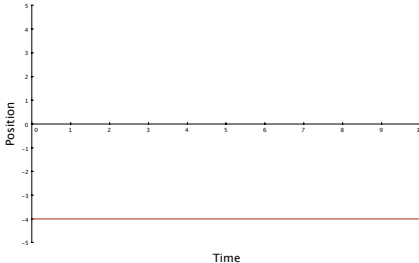
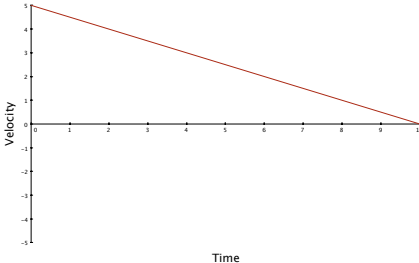
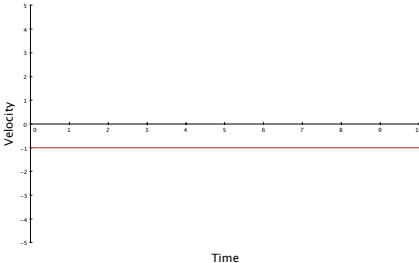
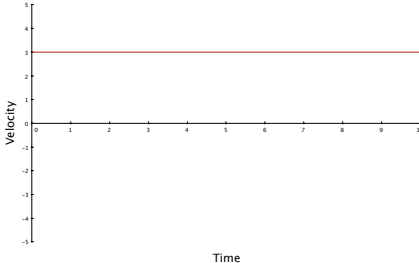
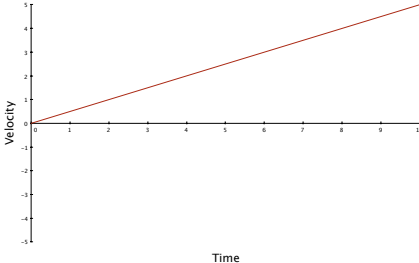
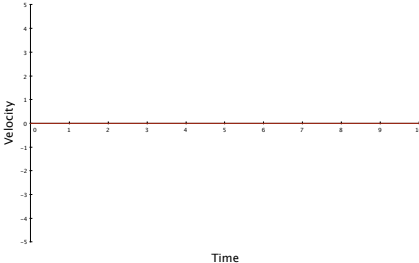
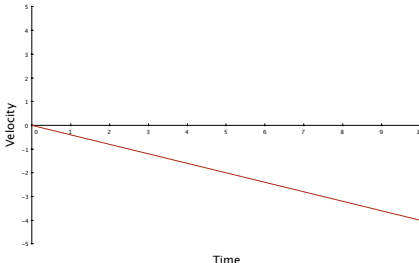
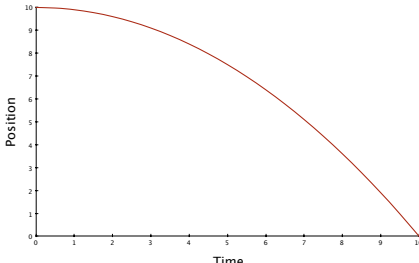
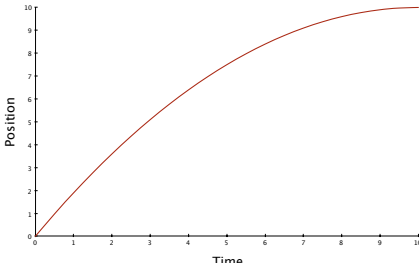
Motion Graph Quiz

For each of the following motion graphs, indicate the **best description** of the motion.

 <p>Position</p> <p>Time</p> <p><input type="checkbox"/> at rest</p> <p><input type="checkbox"/> constant positive velocity</p> <p><input type="checkbox"/> constant negative velocity</p> <p><input type="checkbox"/> constant positive acceleration</p> <p><input type="checkbox"/> constant negative acceleration</p>	 <p>Velocity</p> <p>Time</p> <p><input type="checkbox"/> at rest</p> <p><input type="checkbox"/> constant positive velocity</p> <p><input type="checkbox"/> constant negative velocity</p> <p><input type="checkbox"/> constant positive acceleration</p> <p><input type="checkbox"/> constant negative acceleration</p>	 <p>Velocity</p> <p>Time</p> <p><input type="checkbox"/> at rest</p> <p><input type="checkbox"/> constant positive velocity</p> <p><input type="checkbox"/> constant negative velocity</p> <p><input type="checkbox"/> constant positive acceleration</p> <p><input type="checkbox"/> constant negative acceleration</p>
 <p>Velocity</p> <p>Time</p> <p><input type="checkbox"/> at rest</p> <p><input type="checkbox"/> constant positive velocity</p> <p><input type="checkbox"/> constant negative velocity</p> <p><input type="checkbox"/> constant positive acceleration</p> <p><input type="checkbox"/> constant negative acceleration</p>	 <p>Velocity</p> <p>Time</p> <p><input type="checkbox"/> at rest</p> <p><input type="checkbox"/> constant positive velocity</p> <p><input type="checkbox"/> constant negative velocity</p> <p><input type="checkbox"/> constant positive acceleration</p> <p><input type="checkbox"/> constant negative acceleration</p>	 <p>Velocity</p> <p>Time</p> <p><input type="checkbox"/> at rest</p> <p><input type="checkbox"/> constant positive velocity</p> <p><input type="checkbox"/> constant negative velocity</p> <p><input type="checkbox"/> constant positive acceleration</p> <p><input type="checkbox"/> constant negative acceleration</p>
 <p>Velocity</p> <p>Time</p> <p><input type="checkbox"/> at rest</p> <p><input type="checkbox"/> constant positive velocity</p> <p><input type="checkbox"/> constant negative velocity</p> <p><input type="checkbox"/> constant positive acceleration</p> <p><input type="checkbox"/> constant negative acceleration</p>	 <p>Position</p> <p>Time</p> <p><input type="checkbox"/> at rest</p> <p><input type="checkbox"/> constant positive velocity</p> <p><input type="checkbox"/> constant negative velocity</p> <p><input type="checkbox"/> constant positive acceleration</p> <p><input type="checkbox"/> constant negative acceleration</p>	 <p>Position</p> <p>Time</p> <p><input type="checkbox"/> at rest</p> <p><input type="checkbox"/> constant positive velocity</p> <p><input type="checkbox"/> constant negative velocity</p> <p><input type="checkbox"/> constant positive acceleration</p> <p><input type="checkbox"/> constant negative acceleration</p>

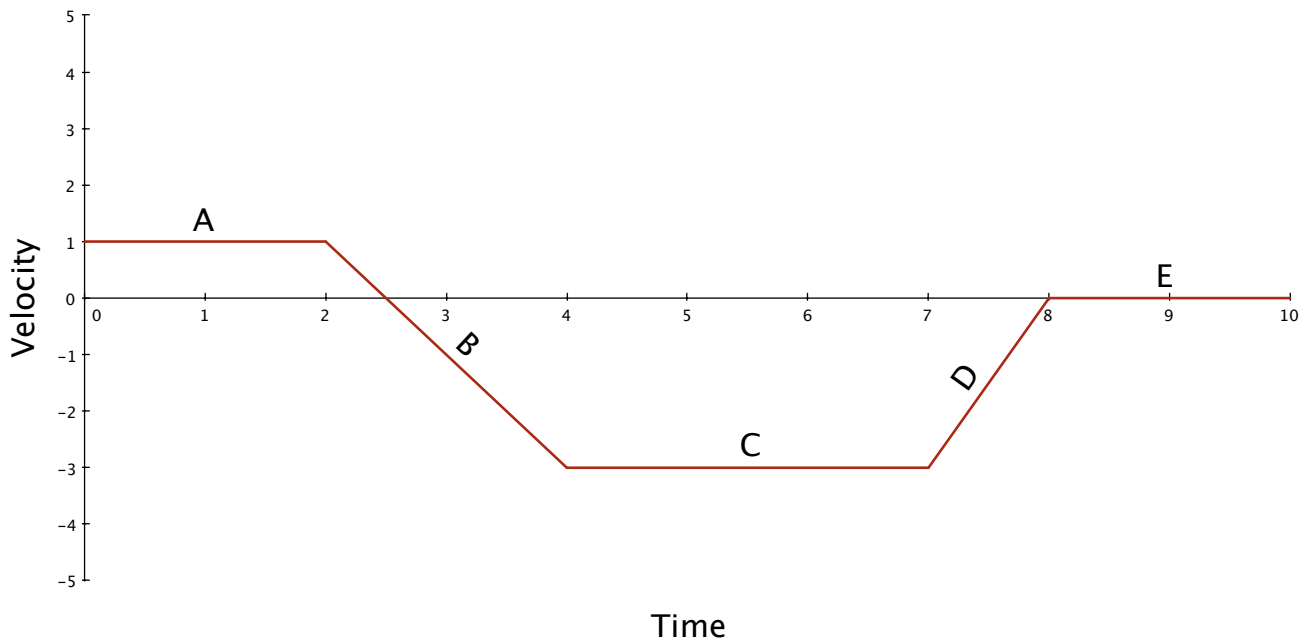
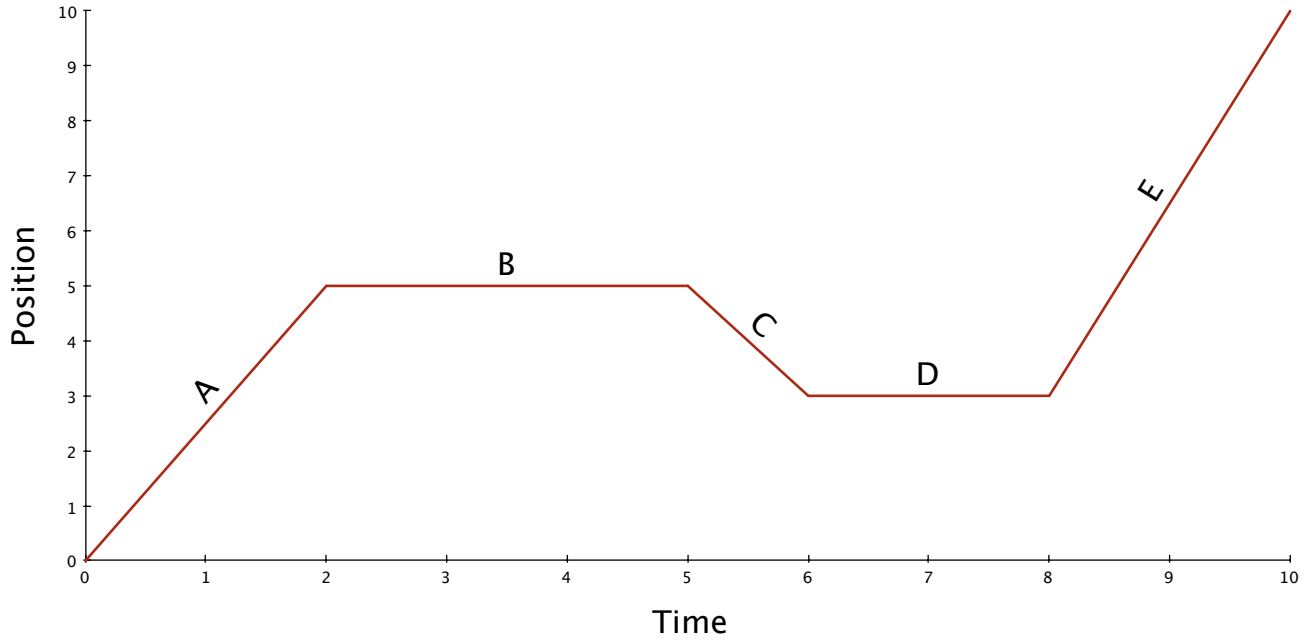
Motion Graph Quiz

For each of the following motion graphs, indicate the **best description** of the motion.

 <p>Position vs Time graph showing a horizontal line at Position = -4.</p> <p><input checked="" type="checkbox"/> at rest</p> <p><input type="checkbox"/> constant positive velocity</p> <p><input type="checkbox"/> constant negative velocity</p> <p><input type="checkbox"/> constant positive acceleration</p> <p><input type="checkbox"/> constant negative acceleration</p>	 <p>Velocity vs Time graph showing a straight line from (0, 5) to (10, -5).</p> <p><input type="checkbox"/> at rest</p> <p><input type="checkbox"/> constant positive velocity</p> <p><input type="checkbox"/> constant negative velocity</p> <p><input type="checkbox"/> constant positive acceleration</p> <p><input checked="" type="checkbox"/> constant negative acceleration</p>	 <p>Velocity vs Time graph showing a horizontal line at Velocity = -1.</p> <p><input type="checkbox"/> at rest</p> <p><input type="checkbox"/> constant positive velocity</p> <p><input checked="" type="checkbox"/> constant negative velocity</p> <p><input type="checkbox"/> constant positive acceleration</p> <p><input type="checkbox"/> constant negative acceleration</p>
 <p>Velocity vs Time graph showing a horizontal line at Velocity = 3.</p> <p><input type="checkbox"/> at rest</p> <p><input checked="" type="checkbox"/> constant positive velocity</p> <p><input type="checkbox"/> constant negative velocity</p> <p><input type="checkbox"/> constant positive acceleration</p> <p><input type="checkbox"/> constant negative acceleration</p>	 <p>Velocity vs Time graph showing a straight line from (0, 0) to (10, 5).</p> <p><input type="checkbox"/> at rest</p> <p><input type="checkbox"/> constant positive velocity</p> <p><input type="checkbox"/> constant negative velocity</p> <p><input checked="" type="checkbox"/> constant positive acceleration</p> <p><input type="checkbox"/> constant negative acceleration</p>	 <p>Velocity vs Time graph showing a horizontal line at Velocity = 0.</p> <p><input checked="" type="checkbox"/> at rest</p> <p><input type="checkbox"/> constant positive velocity</p> <p><input type="checkbox"/> constant negative velocity</p> <p><input type="checkbox"/> constant positive acceleration</p> <p><input type="checkbox"/> constant negative acceleration</p>
 <p>Velocity vs Time graph showing a straight line from (0, 0) to (10, -5).</p> <p><input type="checkbox"/> at rest</p> <p><input type="checkbox"/> constant positive velocity</p> <p><input type="checkbox"/> constant negative velocity</p> <p><input type="checkbox"/> constant positive acceleration</p> <p><input checked="" type="checkbox"/> constant negative acceleration</p>	 <p>Position vs Time graph showing a concave down curve from (0, 10) to (10, 0).</p> <p><input type="checkbox"/> at rest</p> <p><input type="checkbox"/> constant positive velocity</p> <p><input type="checkbox"/> constant negative velocity</p> <p><input type="checkbox"/> constant positive acceleration</p> <p><input checked="" type="checkbox"/> constant negative acceleration</p>	 <p>Position vs Time graph showing a concave down curve from (0, 0) to (10, 10).</p> <p><input type="checkbox"/> at rest</p> <p><input type="checkbox"/> constant positive velocity</p> <p><input type="checkbox"/> constant negative velocity</p> <p><input type="checkbox"/> constant positive acceleration</p> <p><input checked="" type="checkbox"/> constant negative acceleration</p>

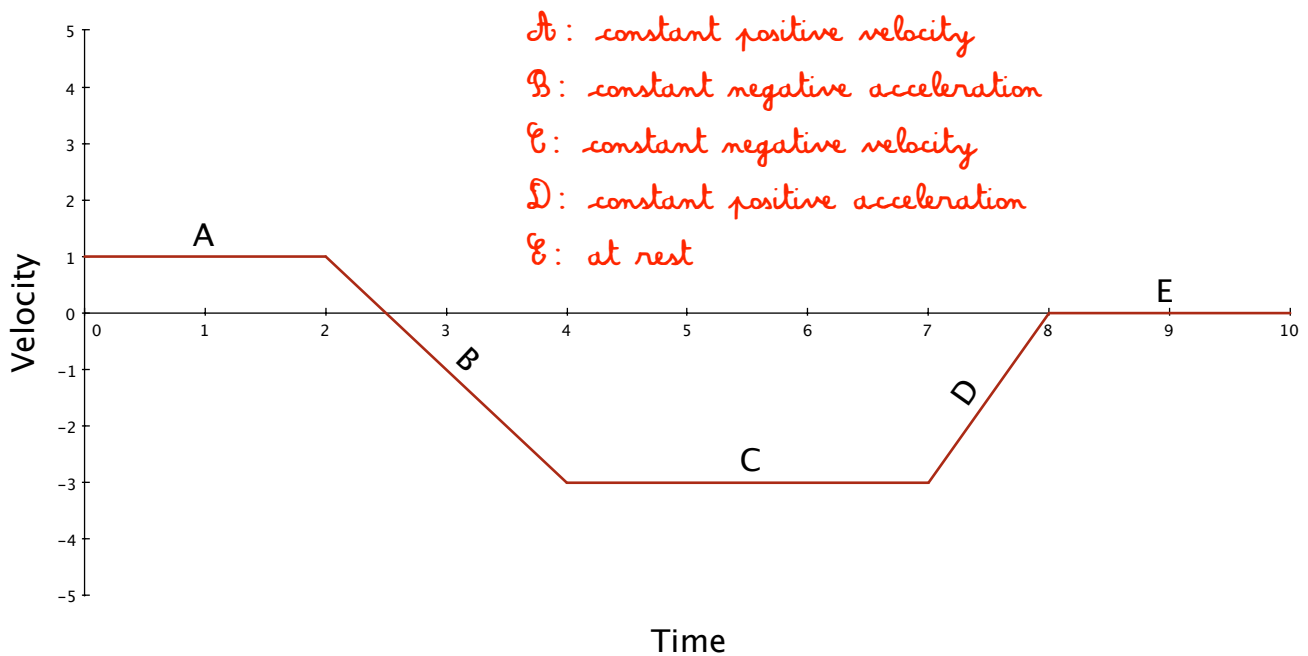
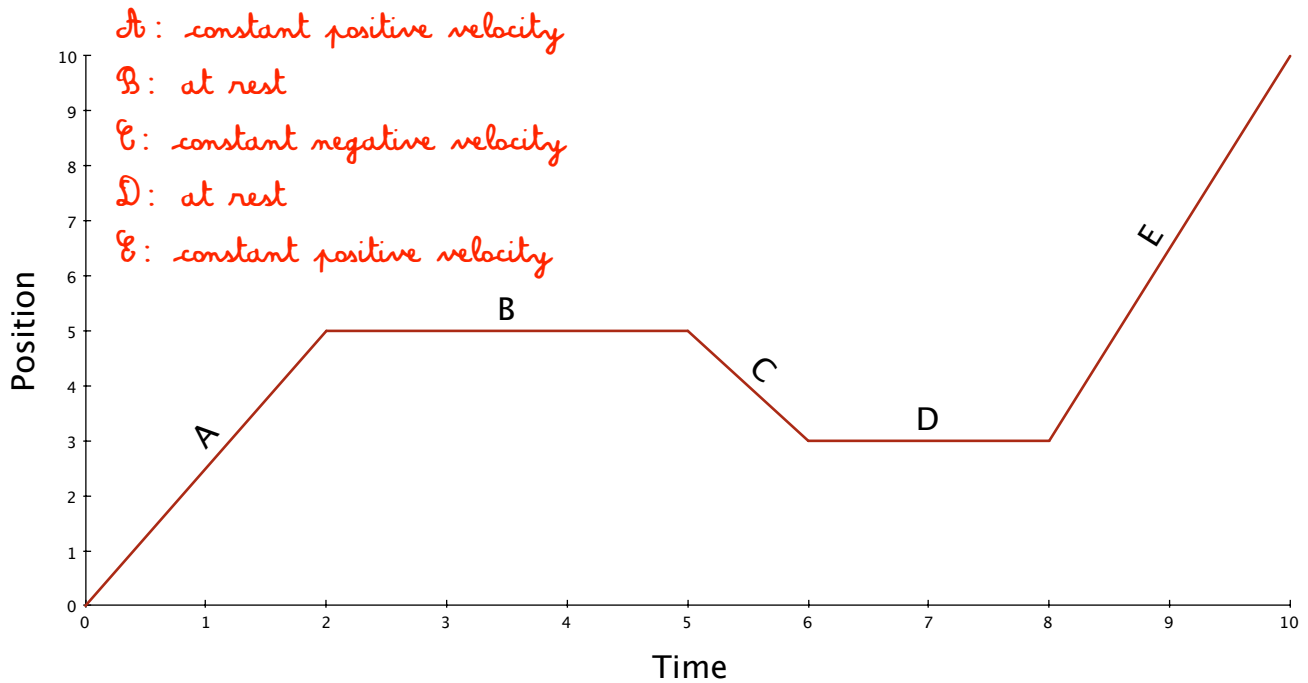
Motion Graph Quiz

Describe the motion of each labelled segment of the following motion graphs.



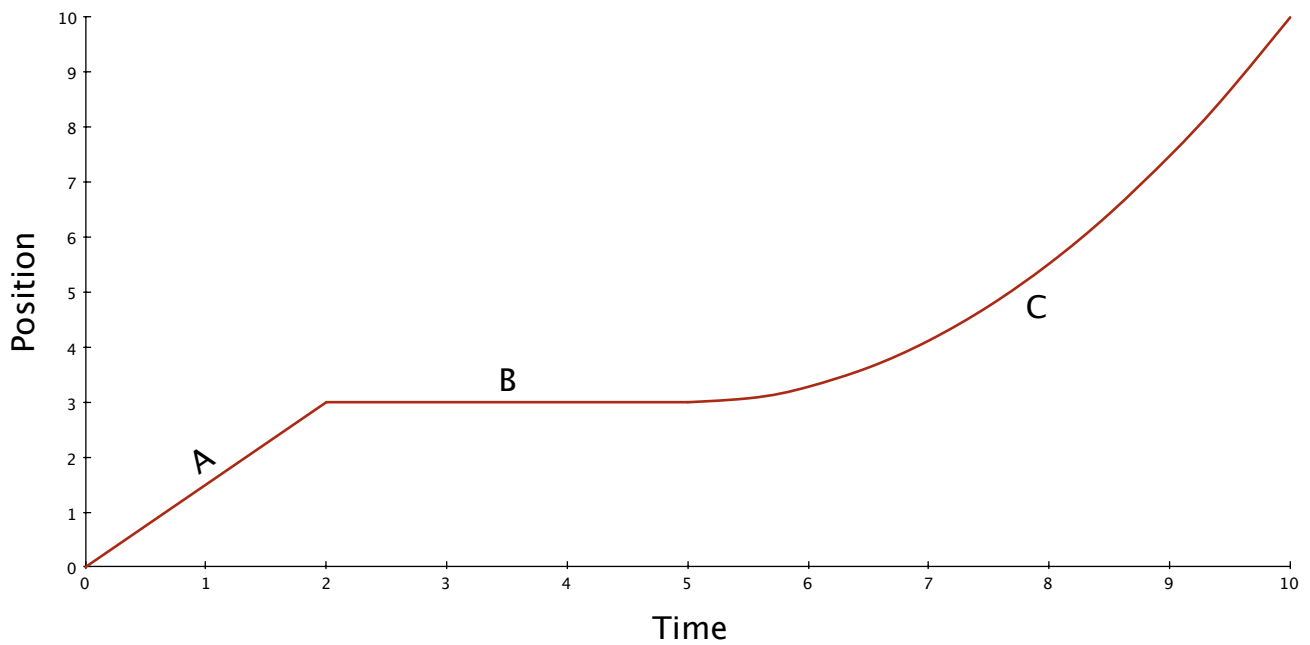
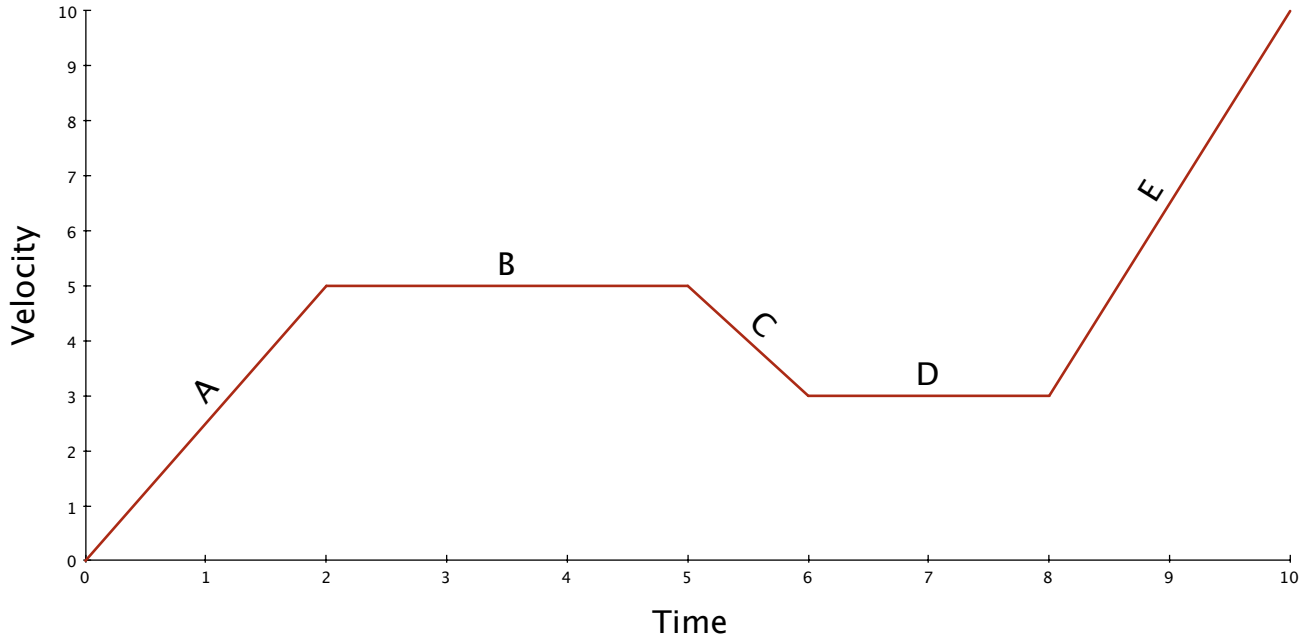
Motion Graph Quiz

Describe the motion of each labelled segment of the following motion graphs.



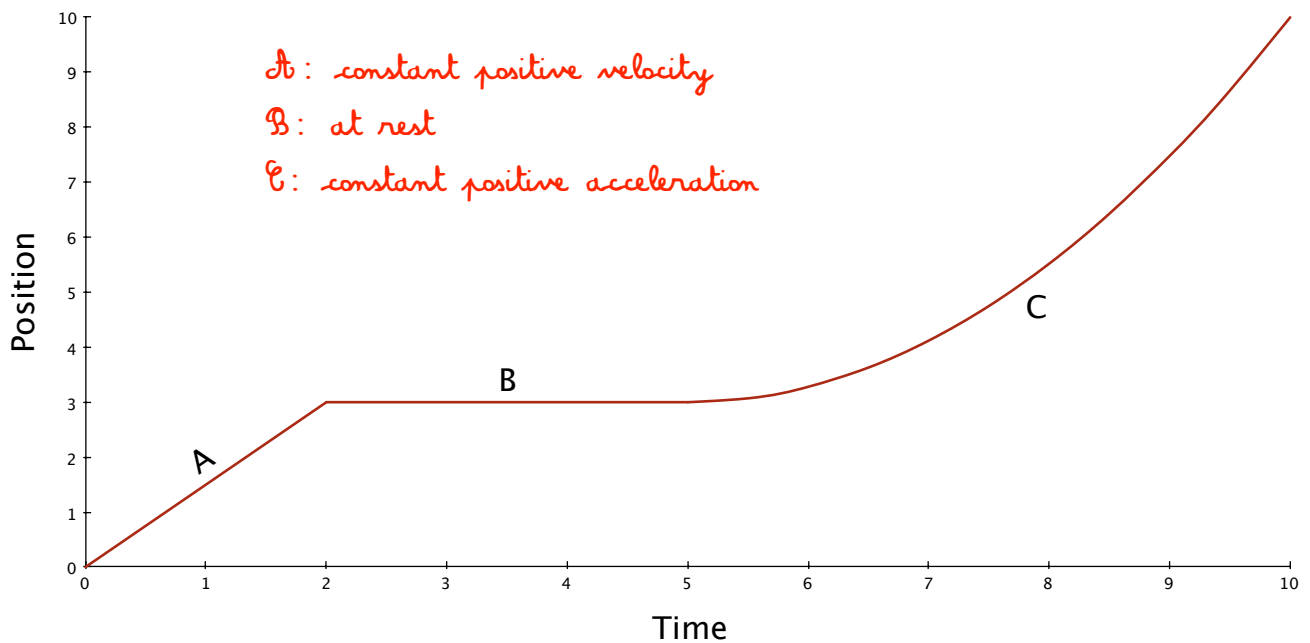
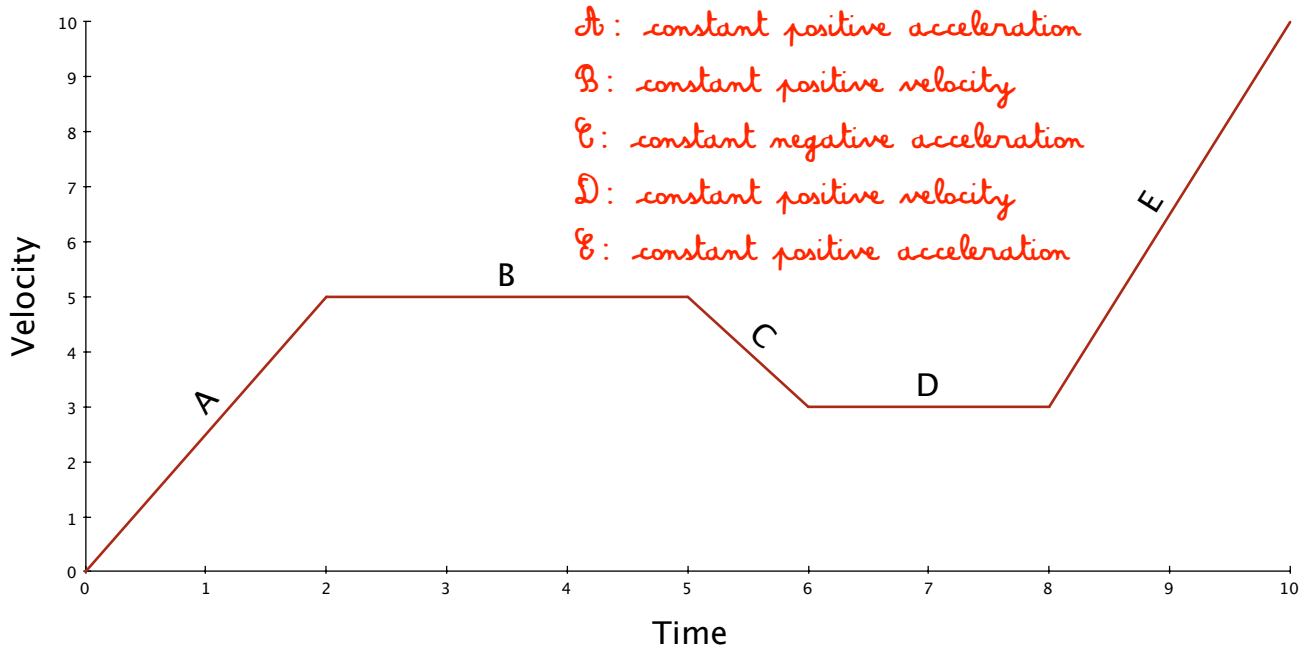
Motion Graph Quiz

Describe the motion of each labelled segment of the following motion graphs.



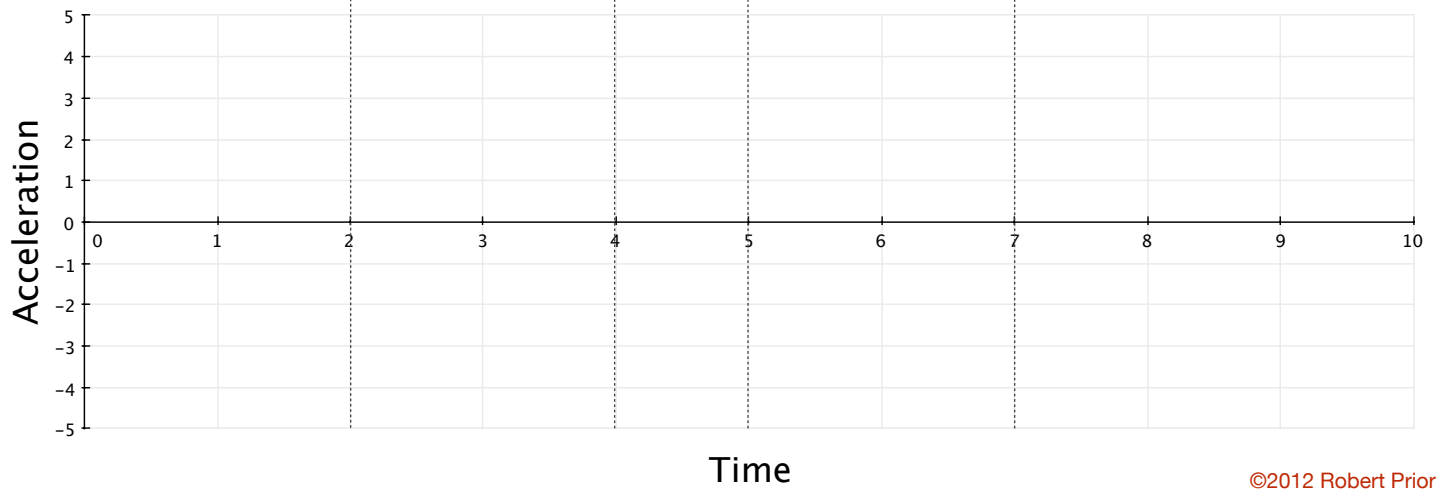
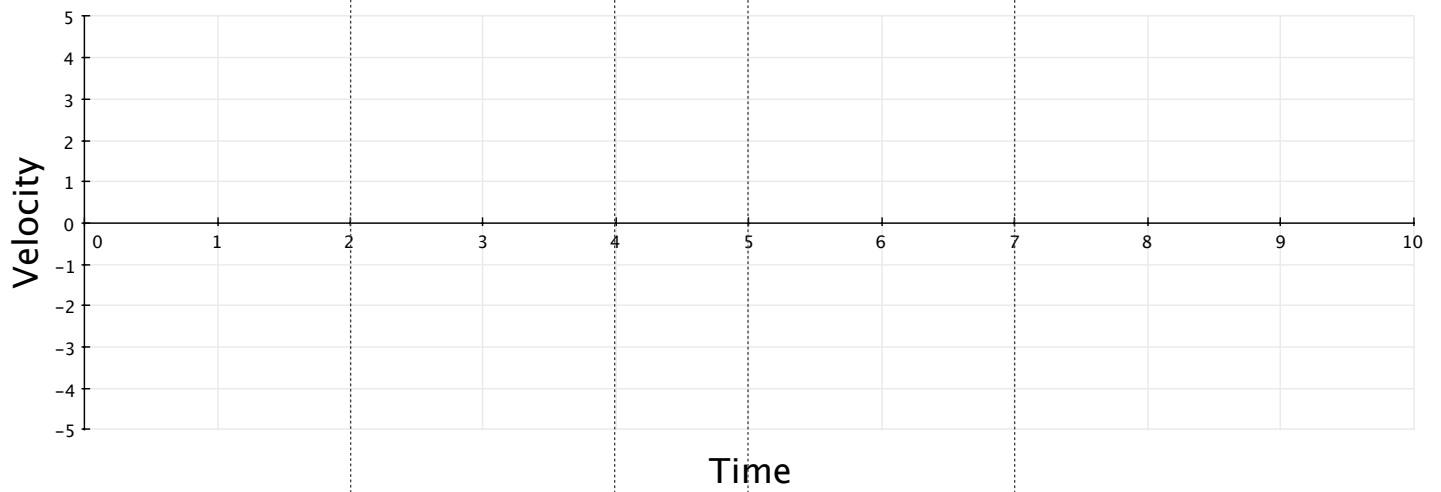
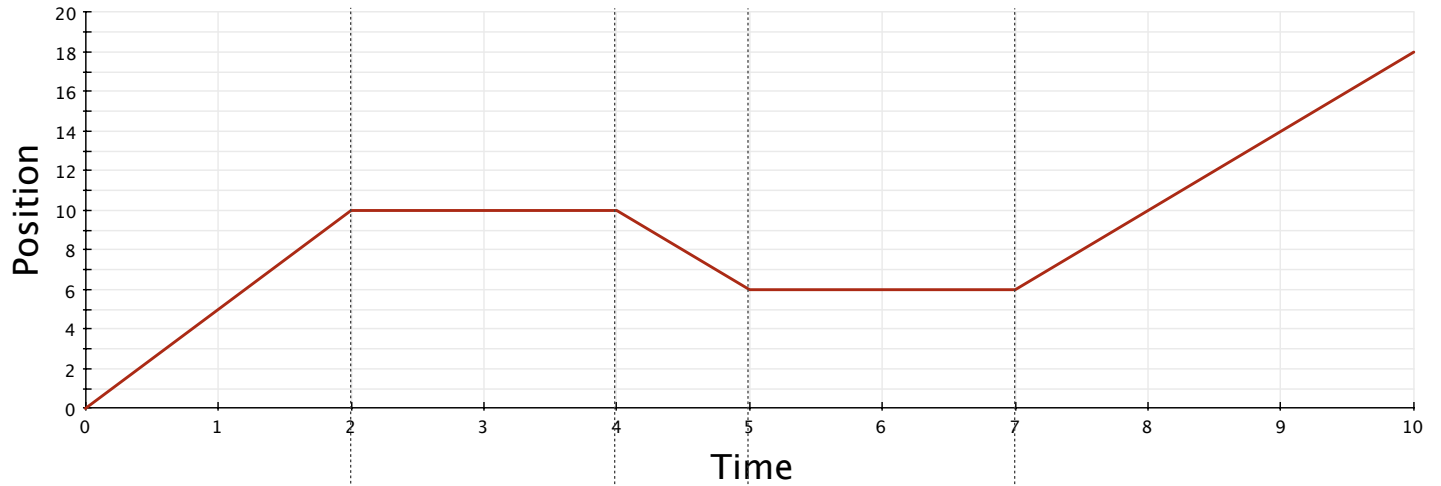
Motion Graph Quiz

Describe the motion of each labelled segment of the following motion graphs.



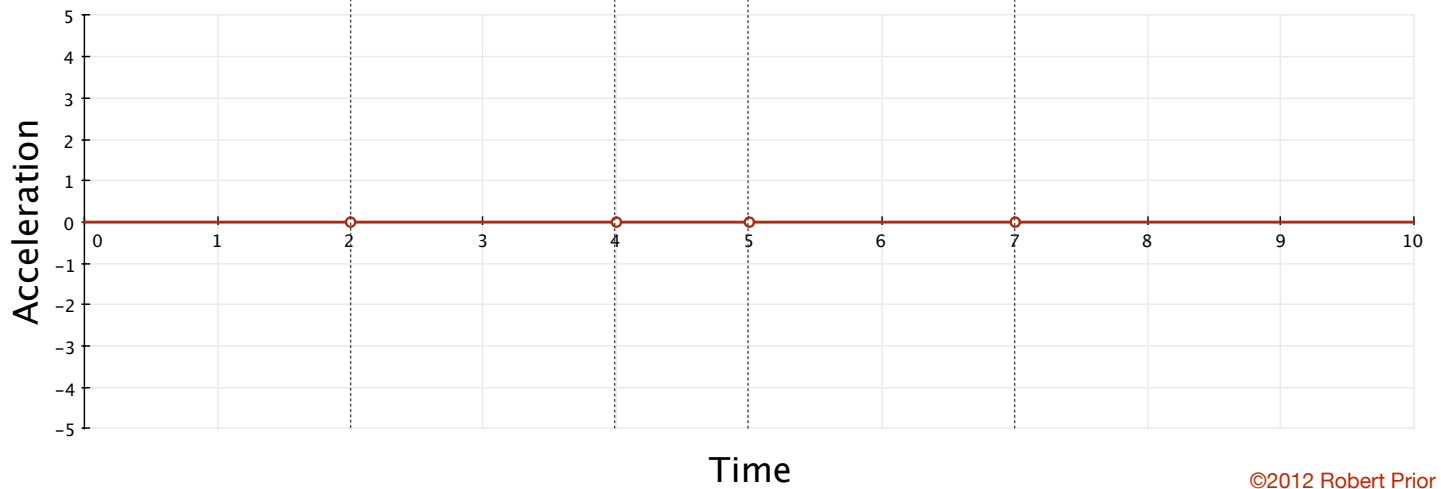
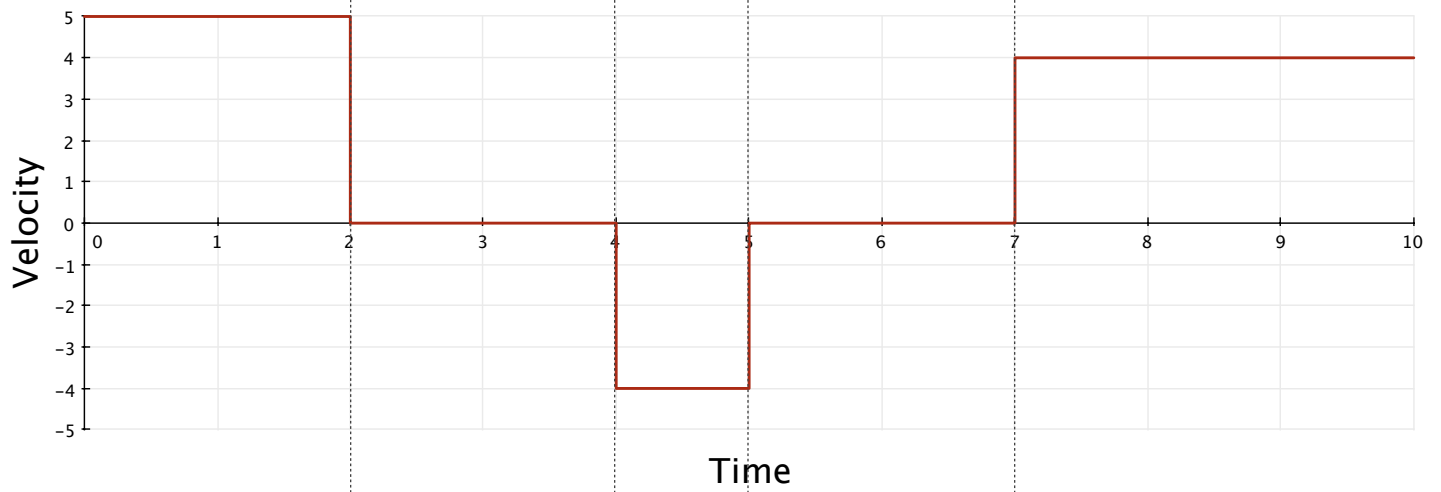
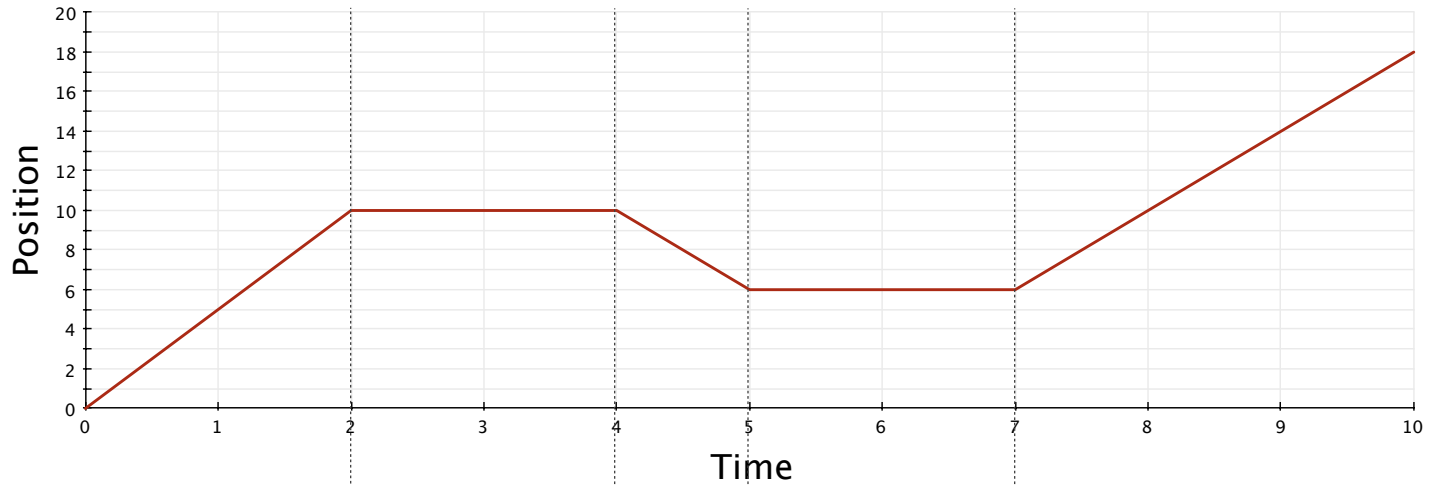
Motion Graph Quiz

Sketch the missing motion graphs.



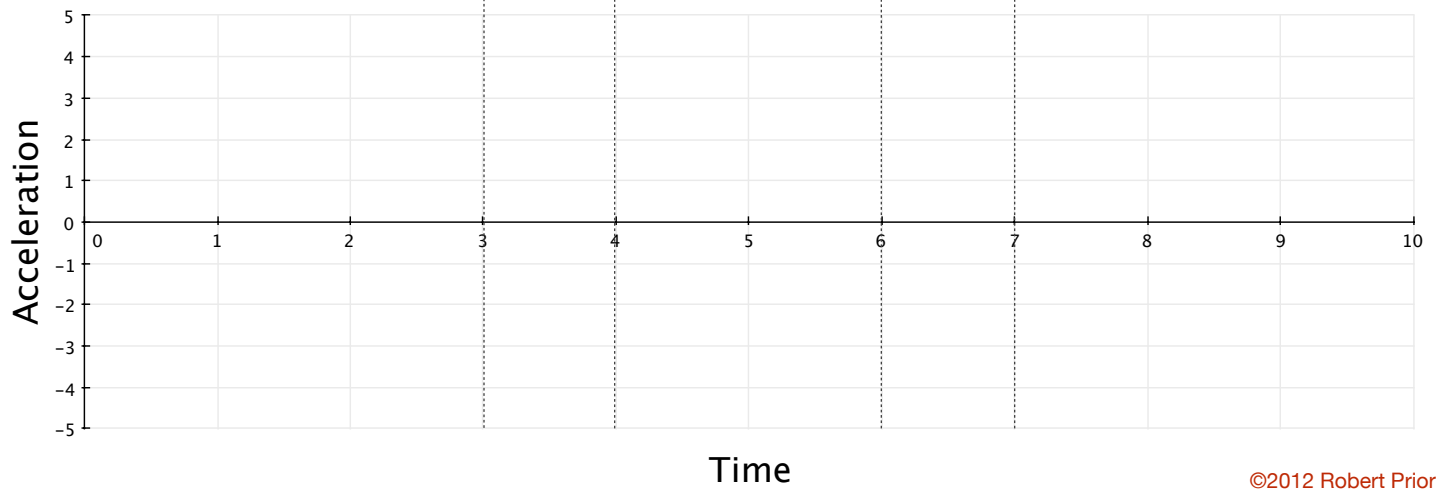
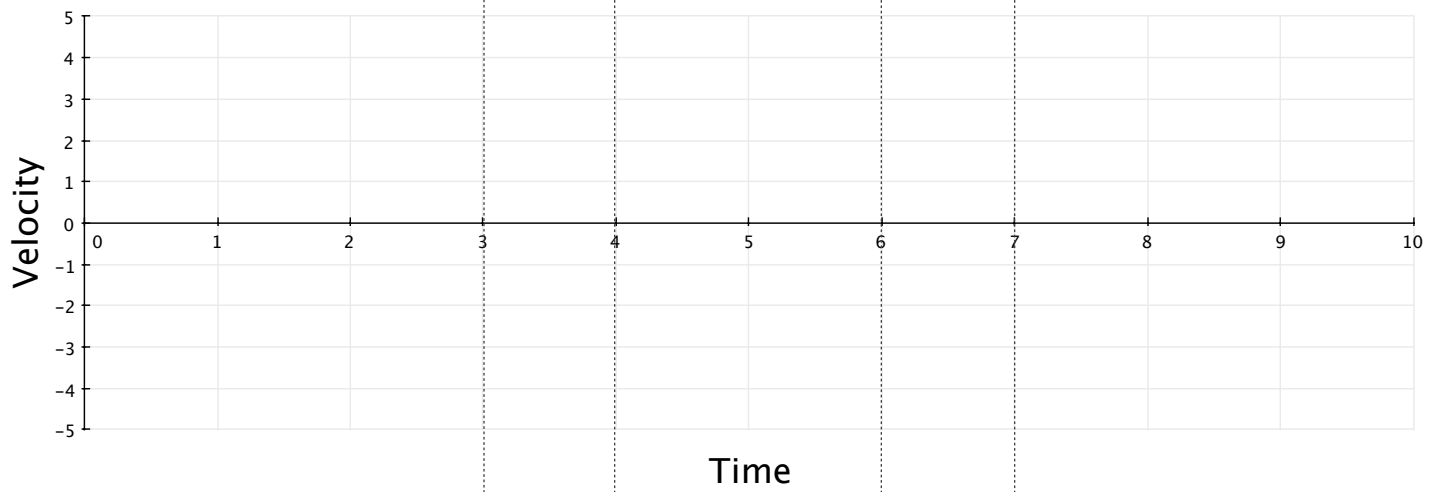
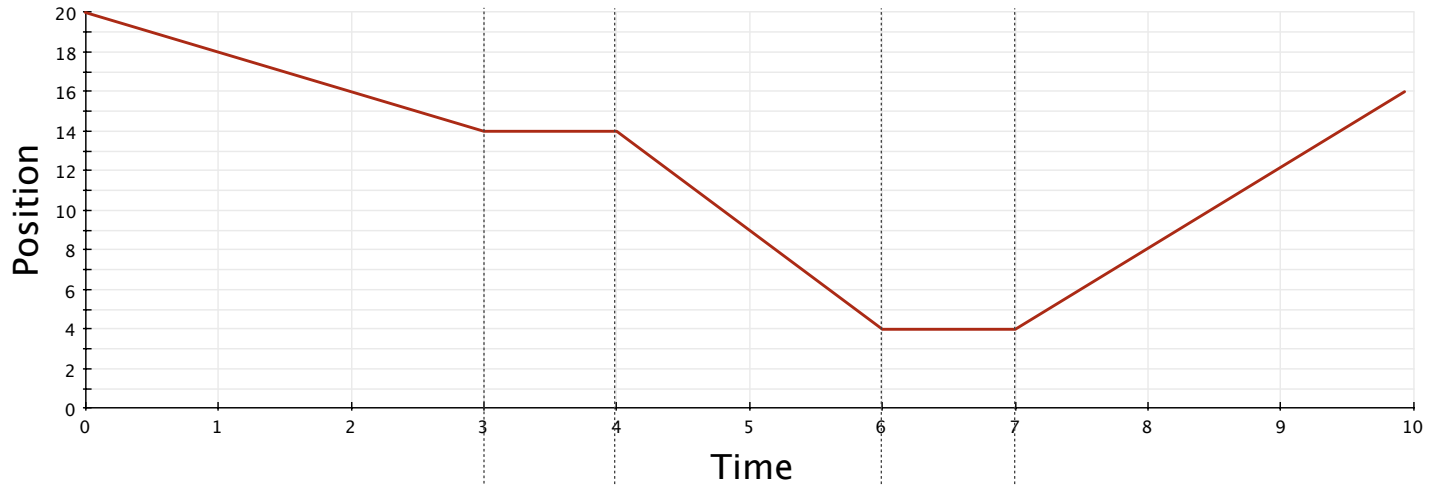
Motion Graph Quiz

Sketch the missing motion graphs.



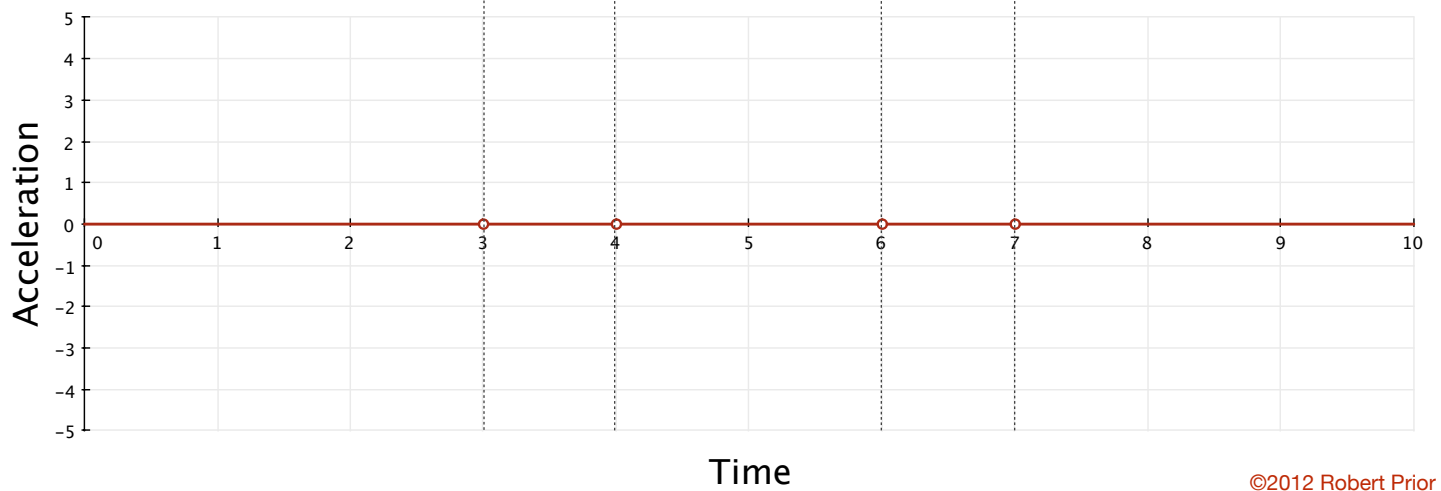
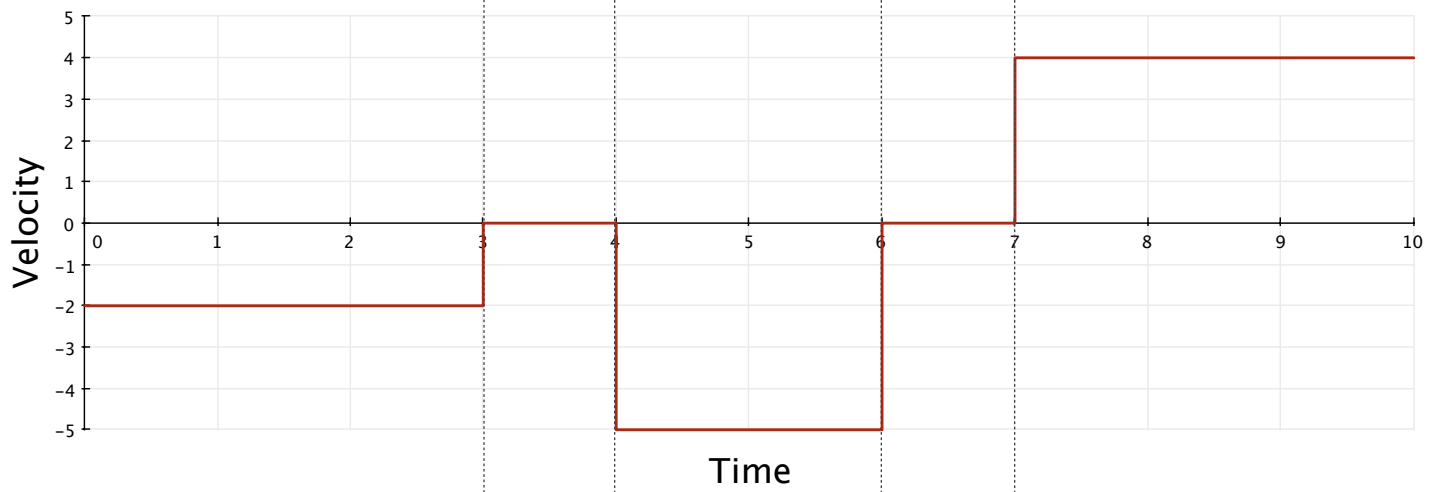
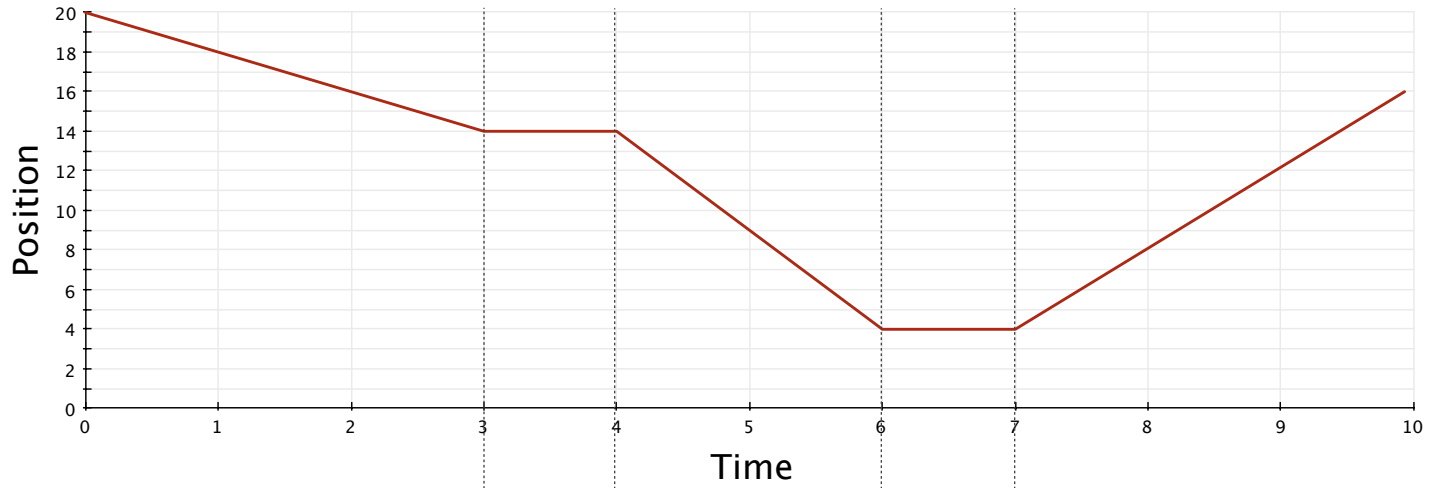
Motion Graph Quiz

Sketch the missing motion graphs.



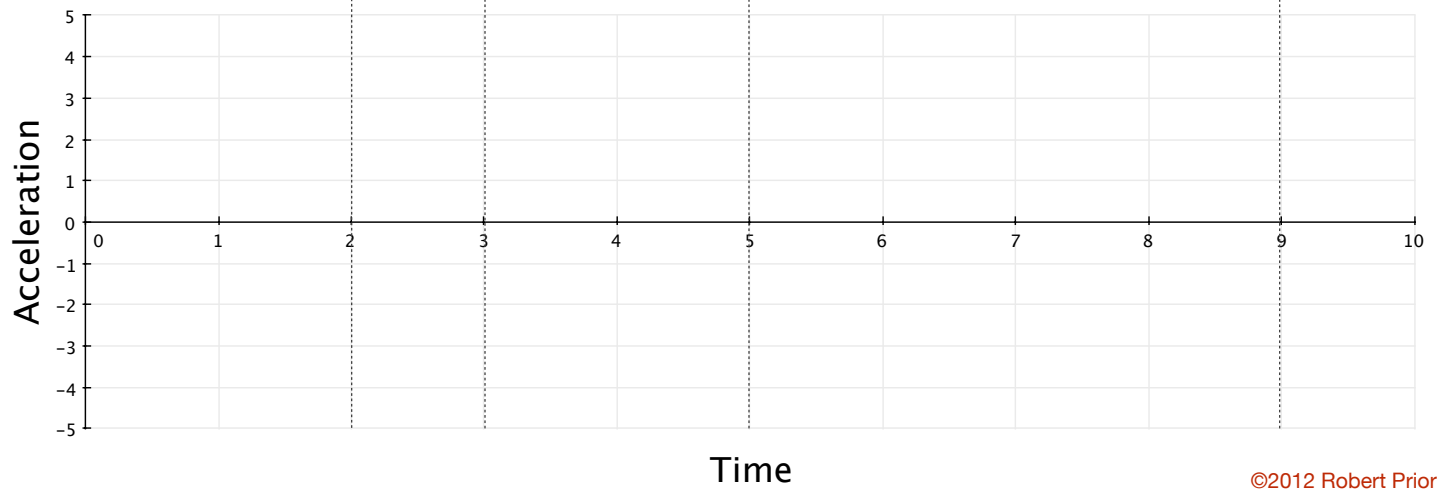
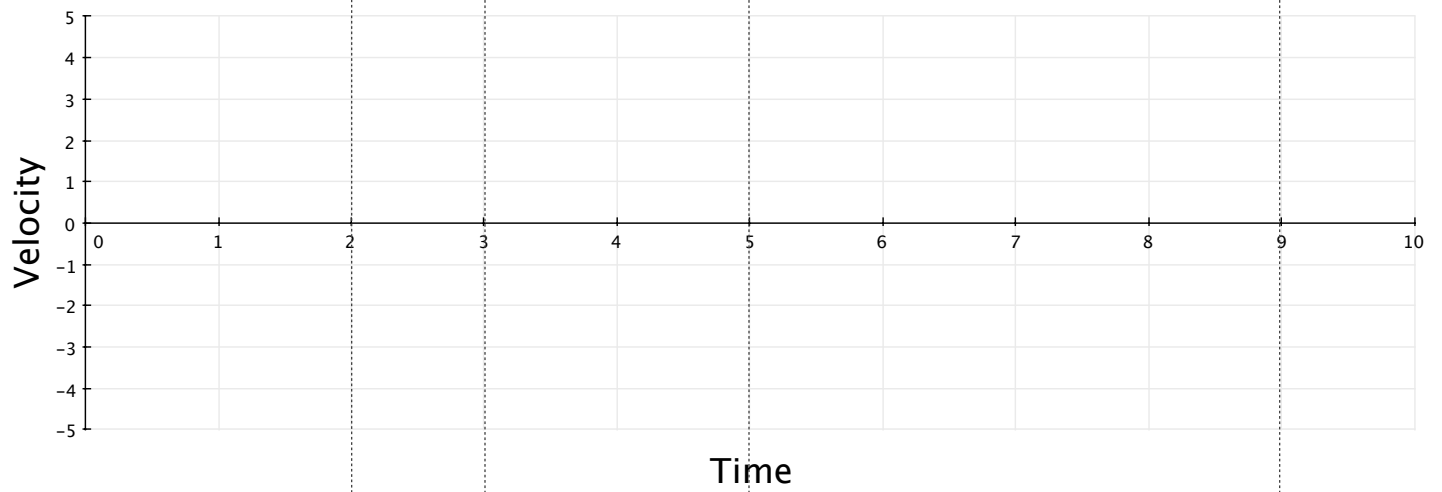
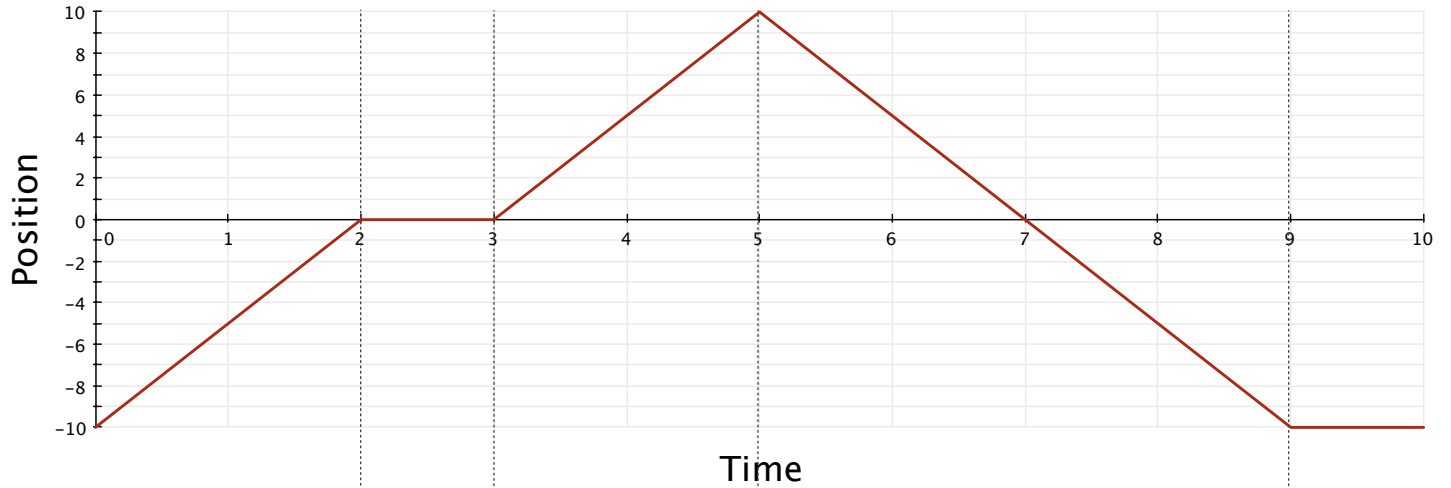
Motion Graph Quiz

Sketch the missing motion graphs.



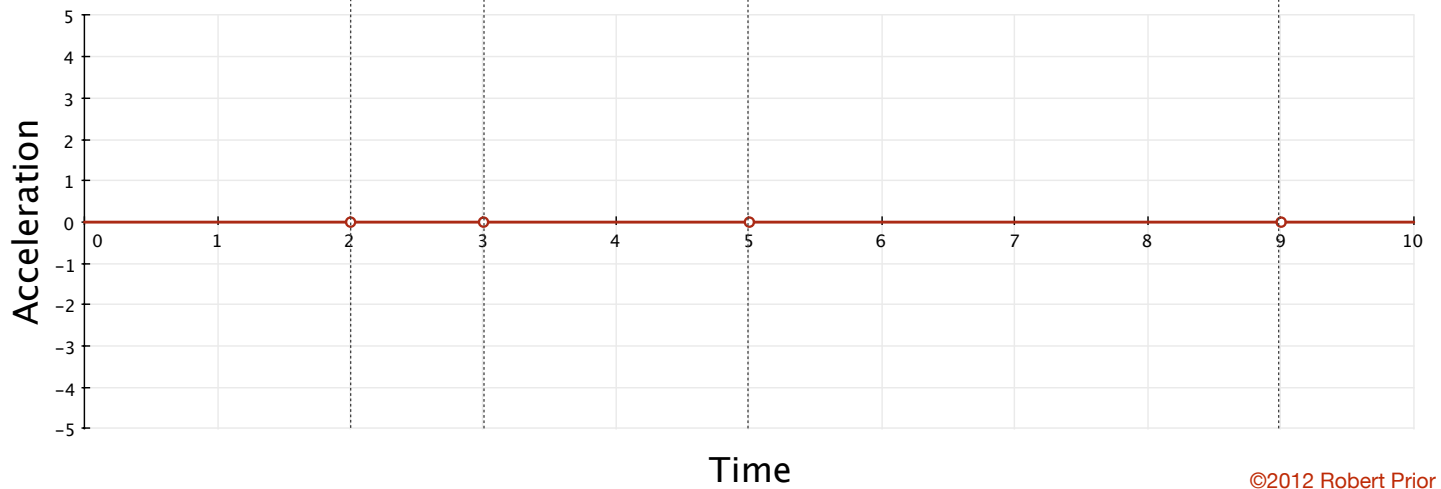
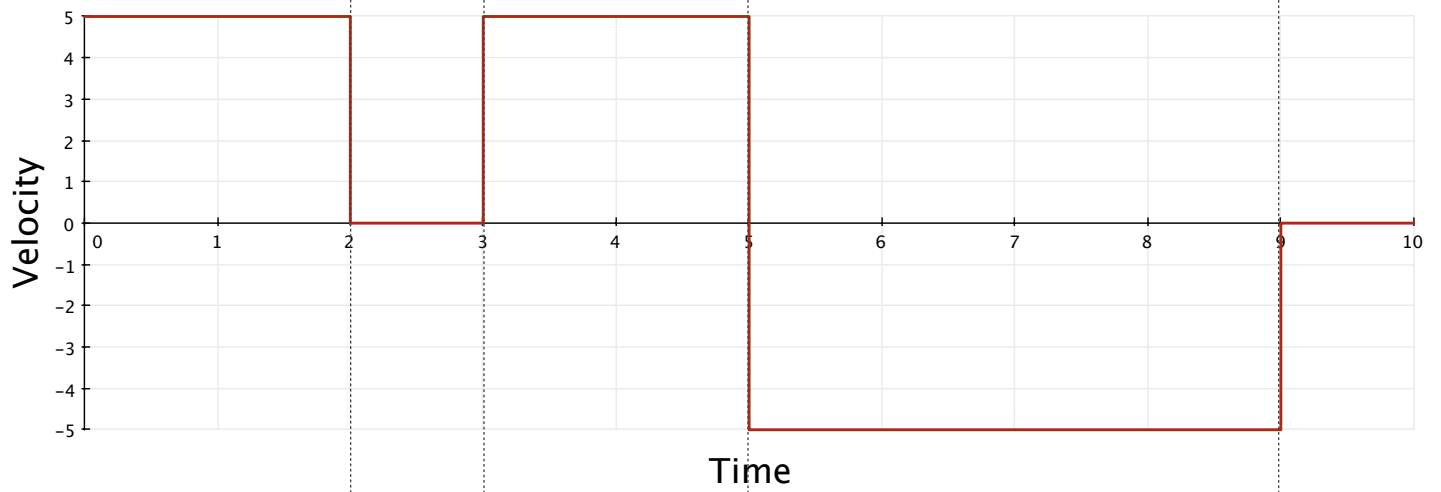
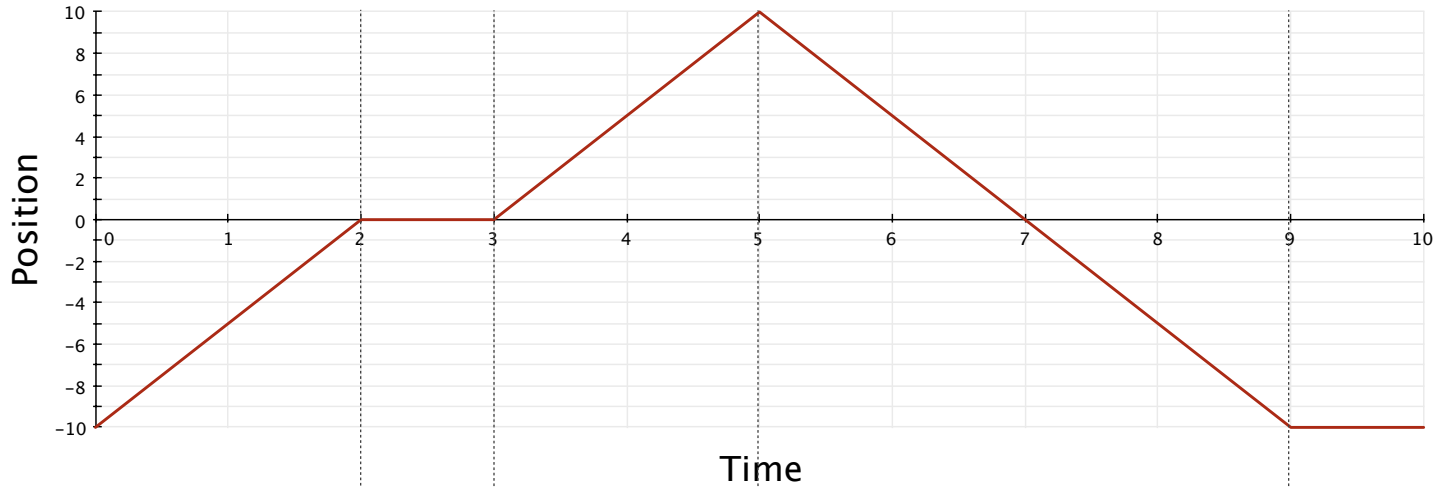
Motion Graph Quiz

Sketch the missing motion graphs.



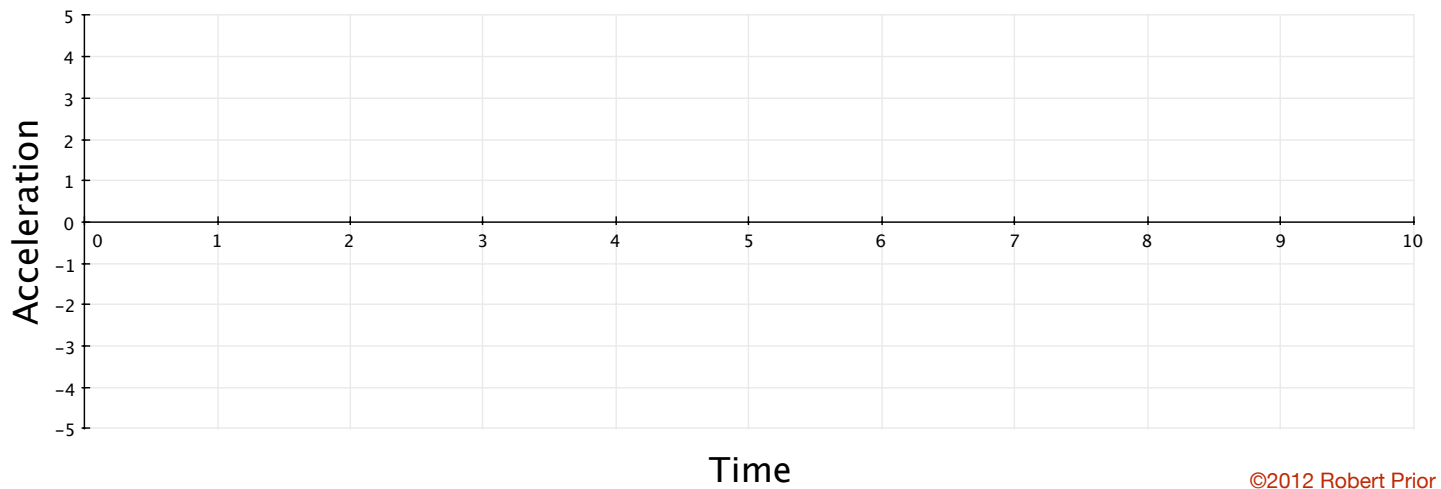
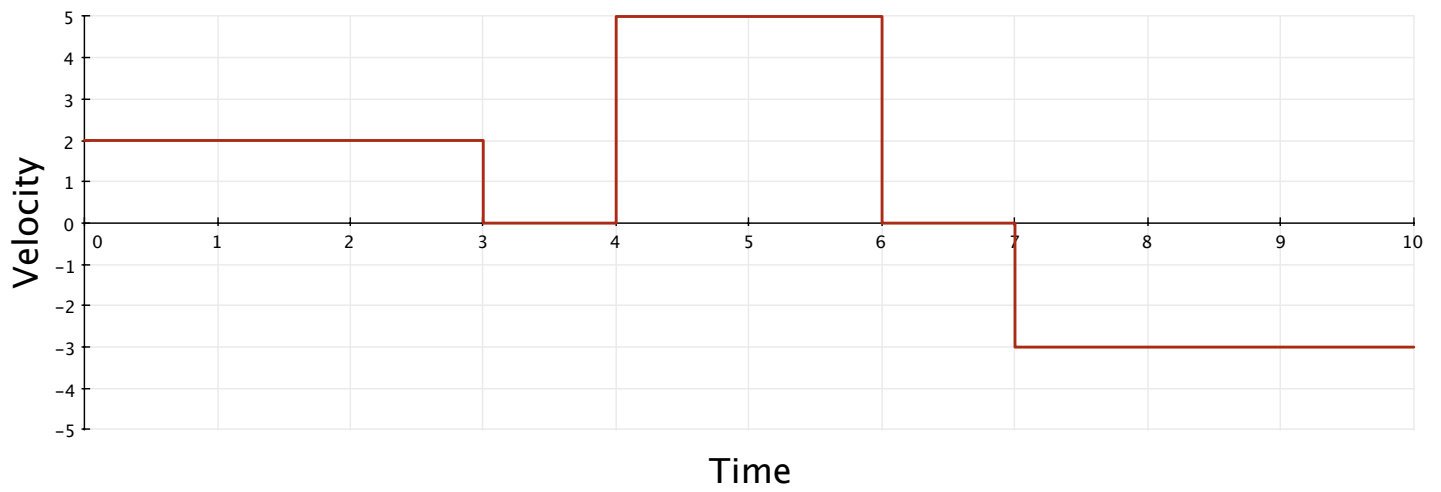
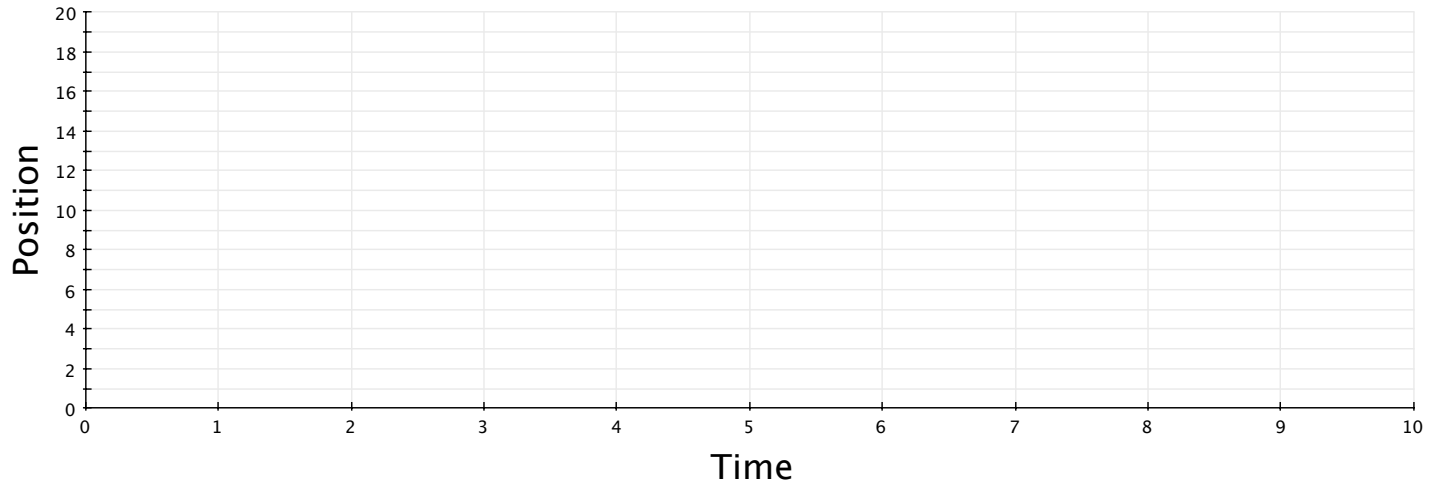
Motion Graph Quiz

Sketch the missing motion graphs.



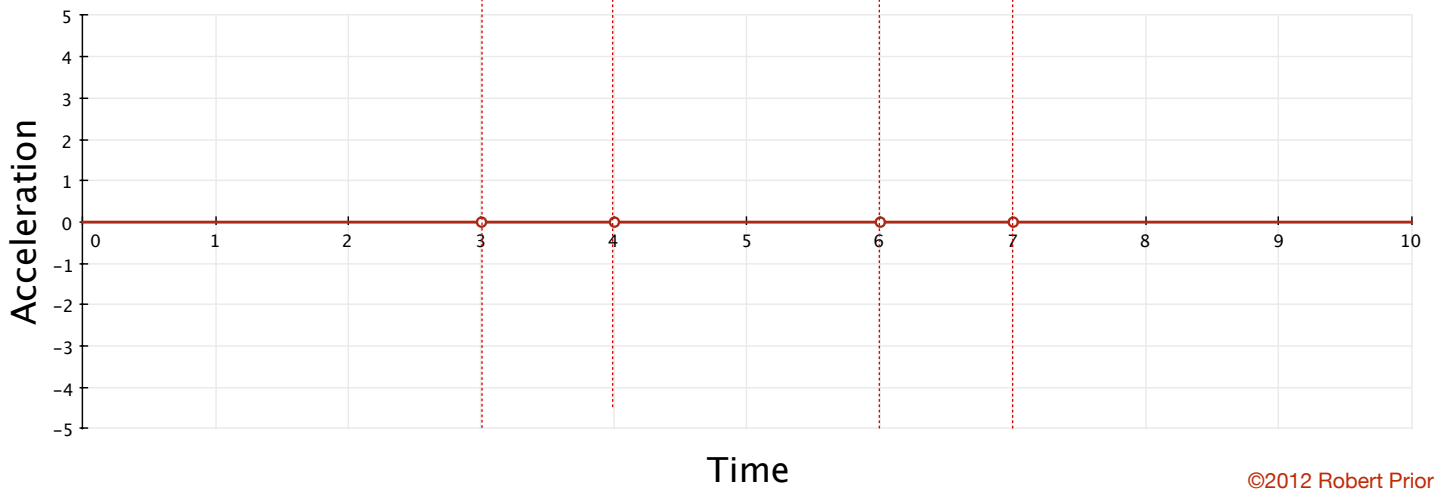
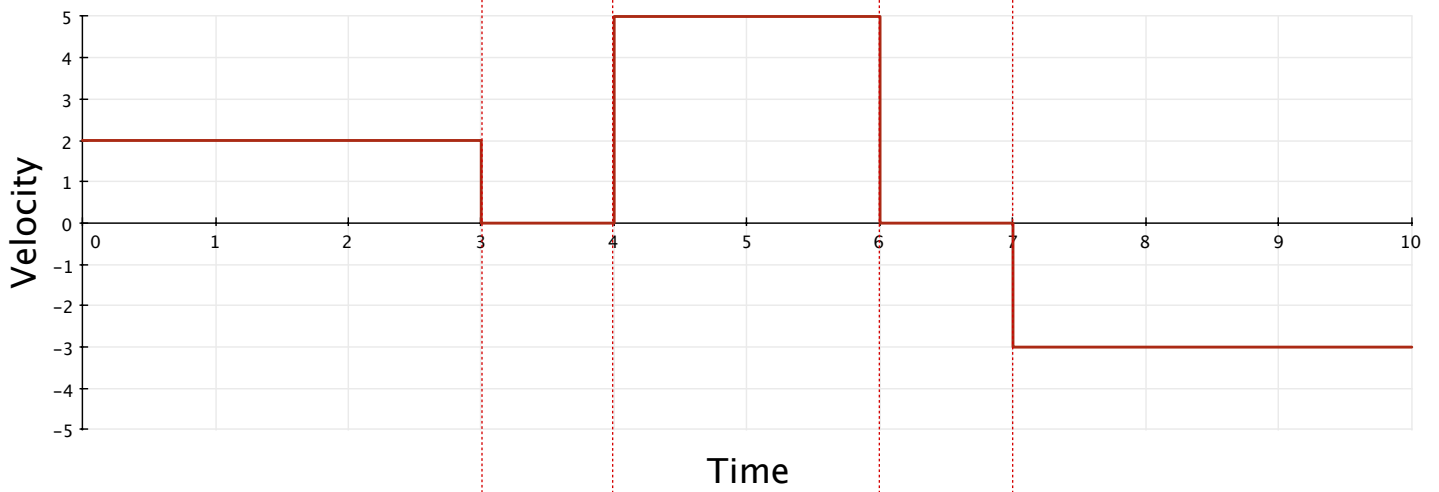
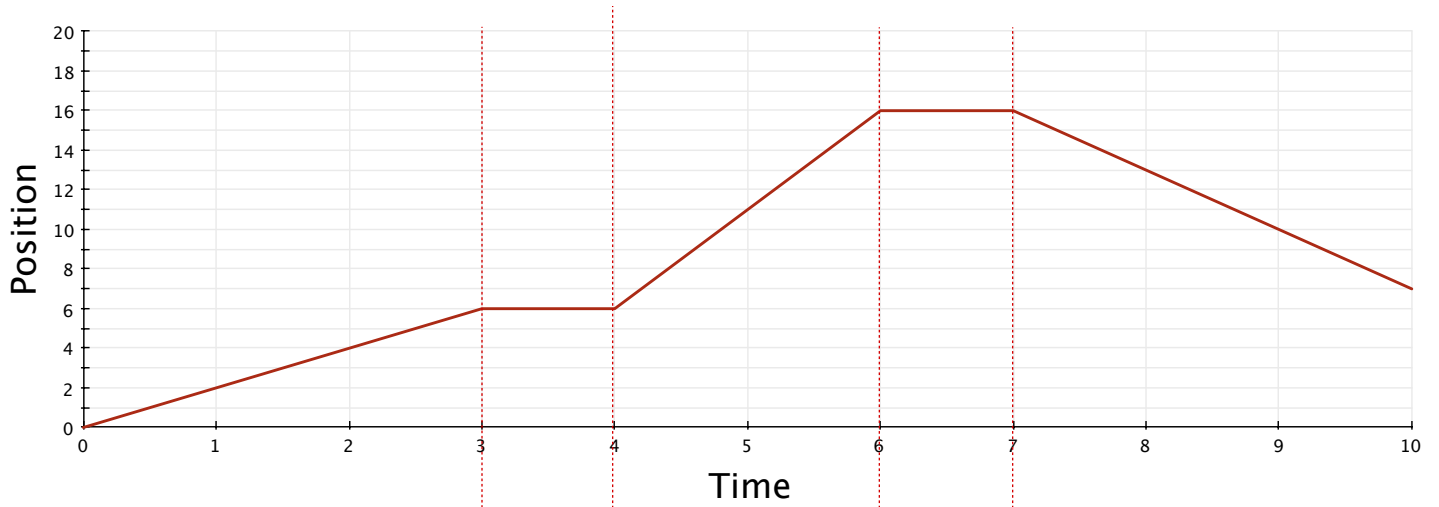
Motion Graph Quiz

Sketch the missing motion graphs.



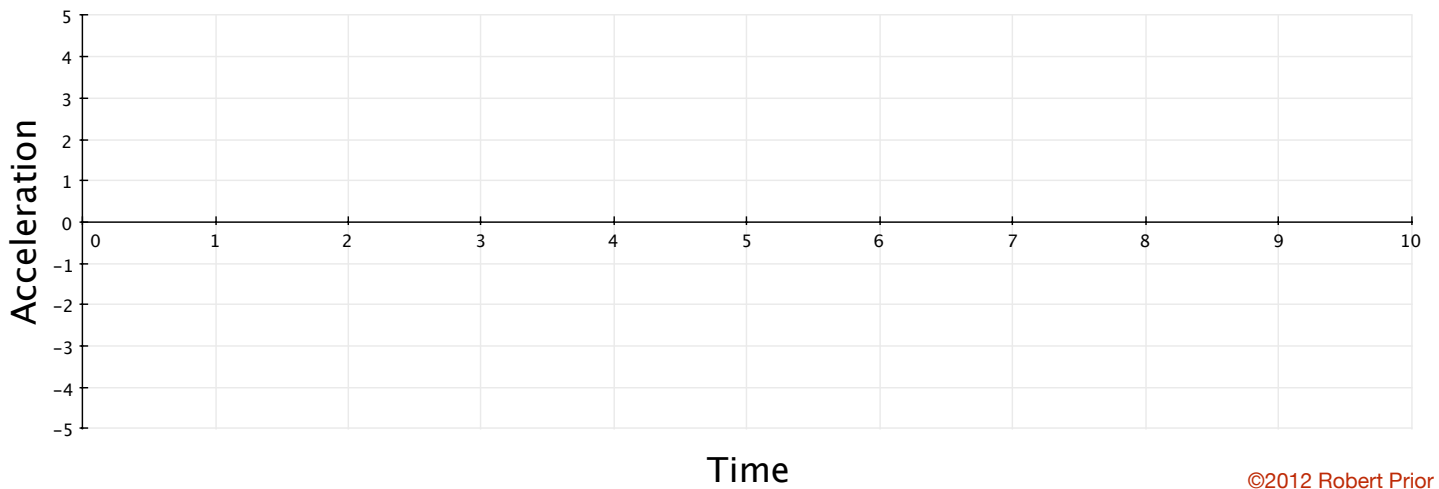
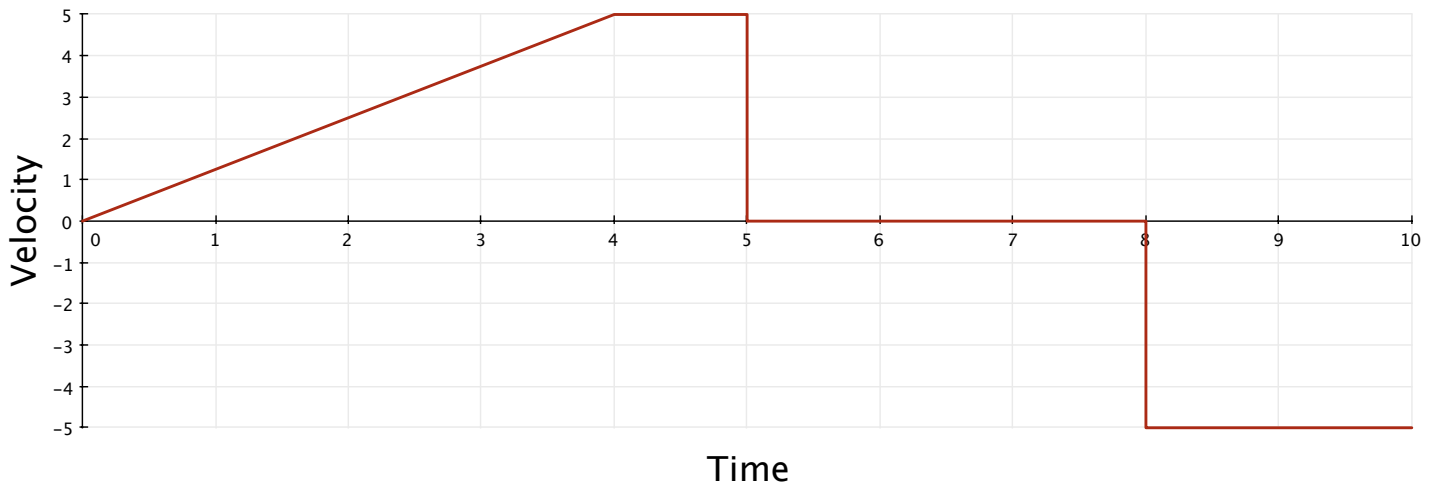
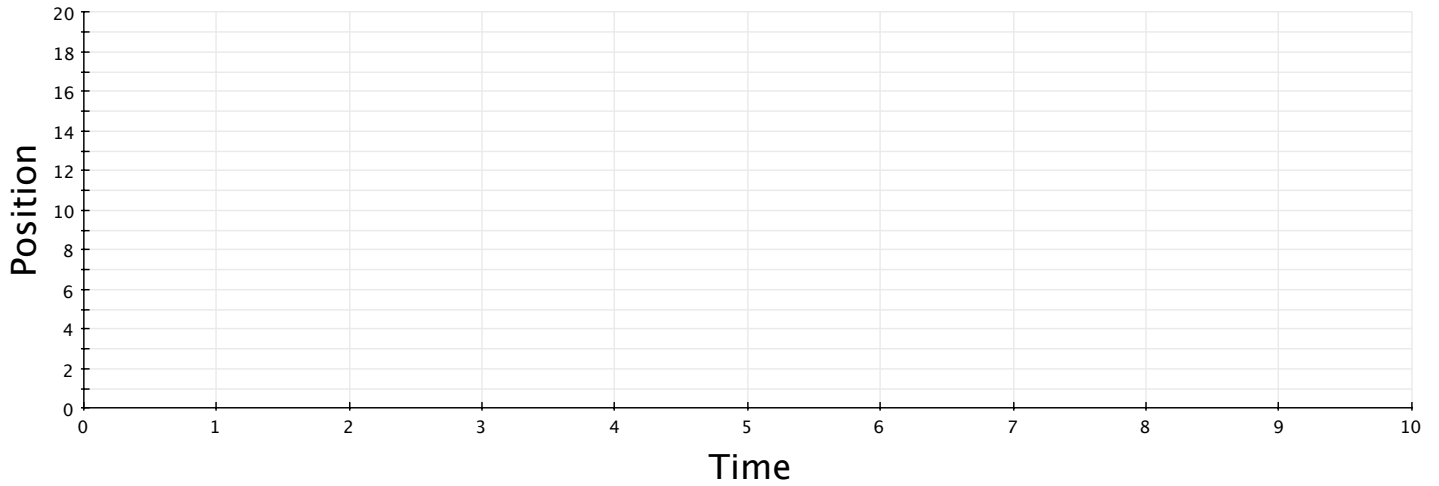
Motion Graph Quiz

Sketch the missing motion graphs.



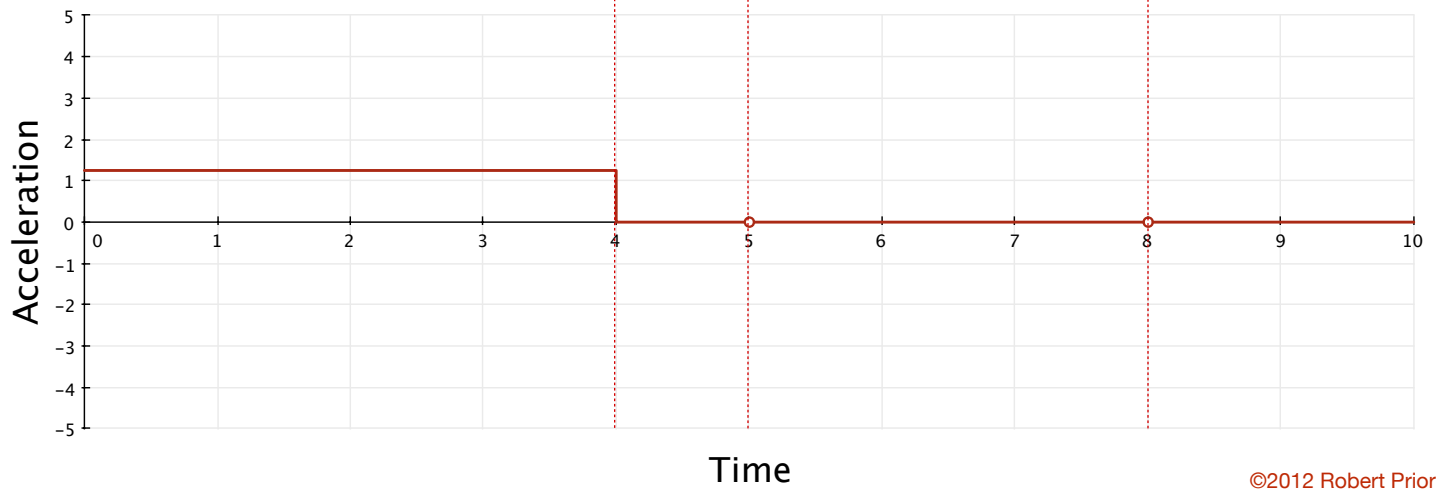
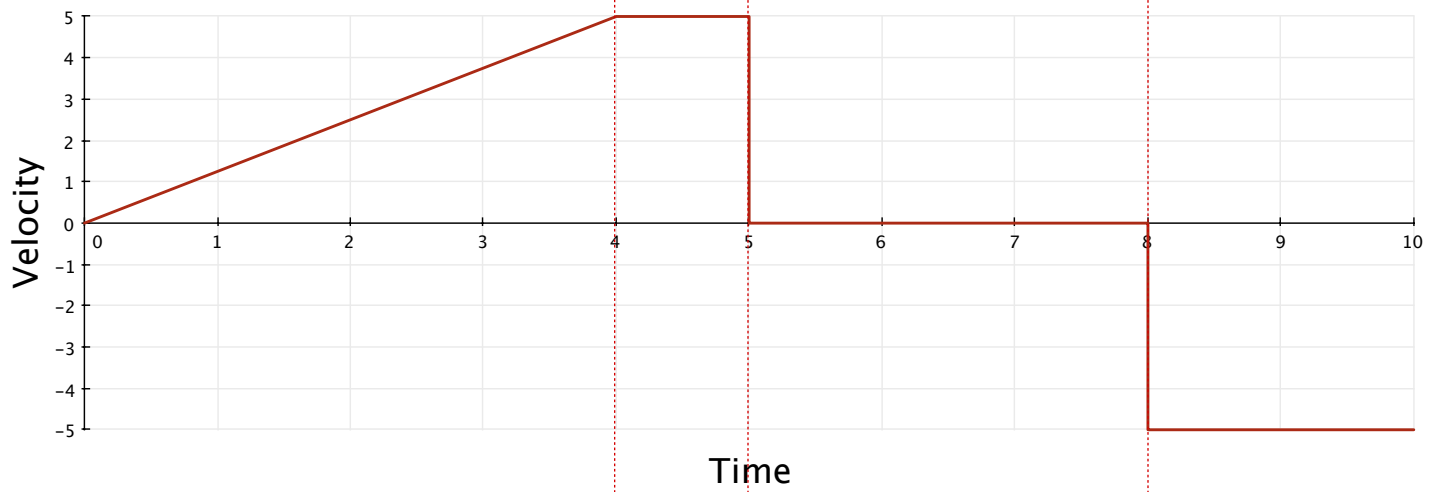
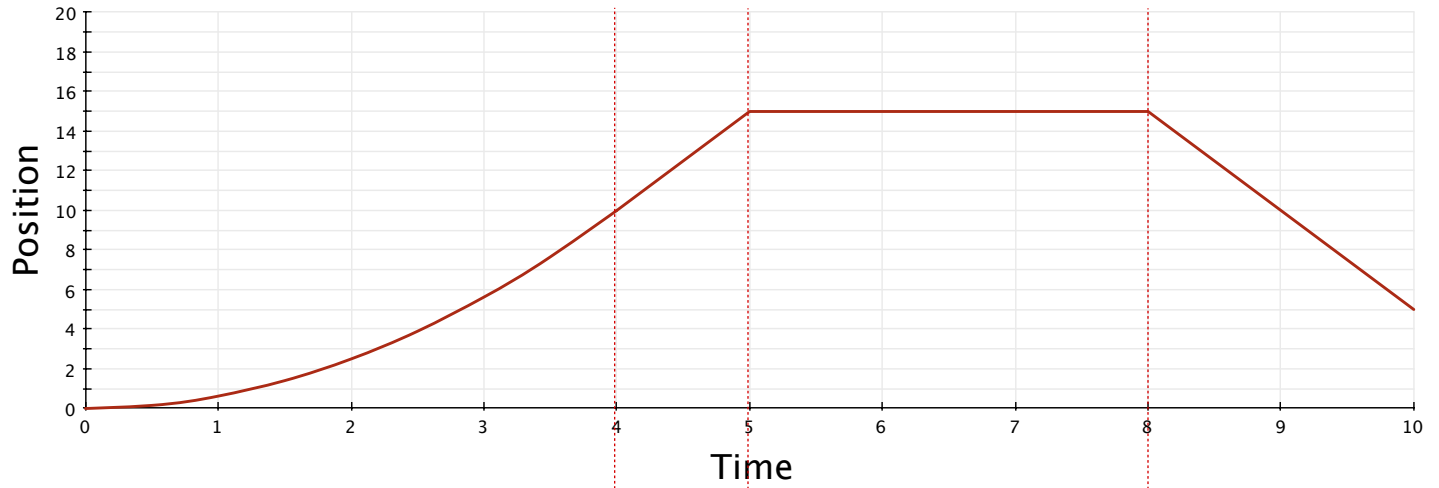
Motion Graph Quiz

Sketch the missing motion graphs.



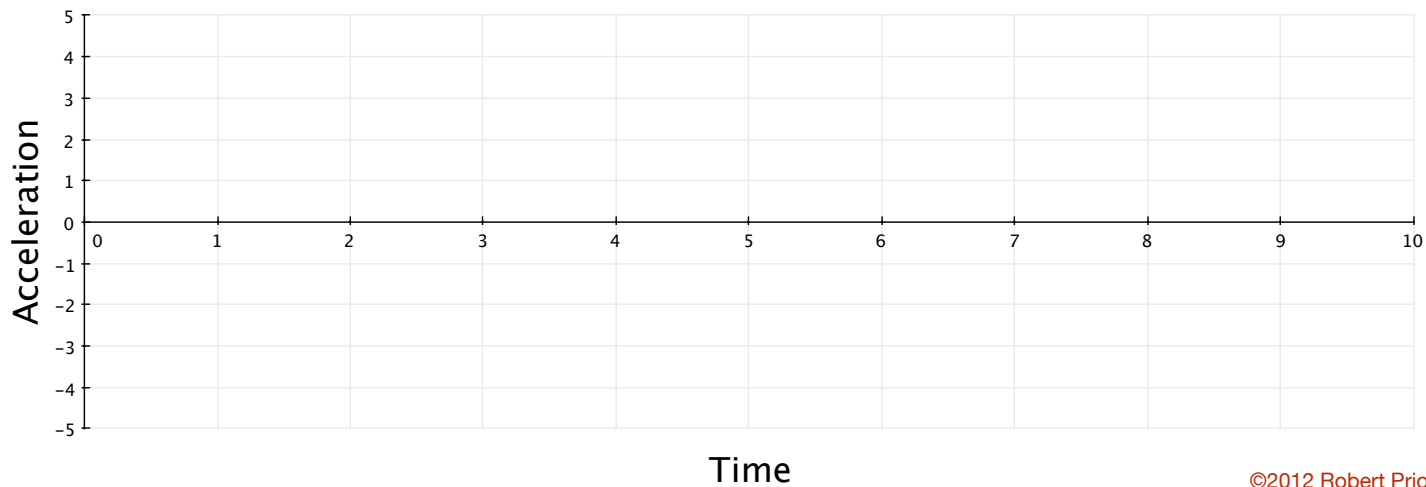
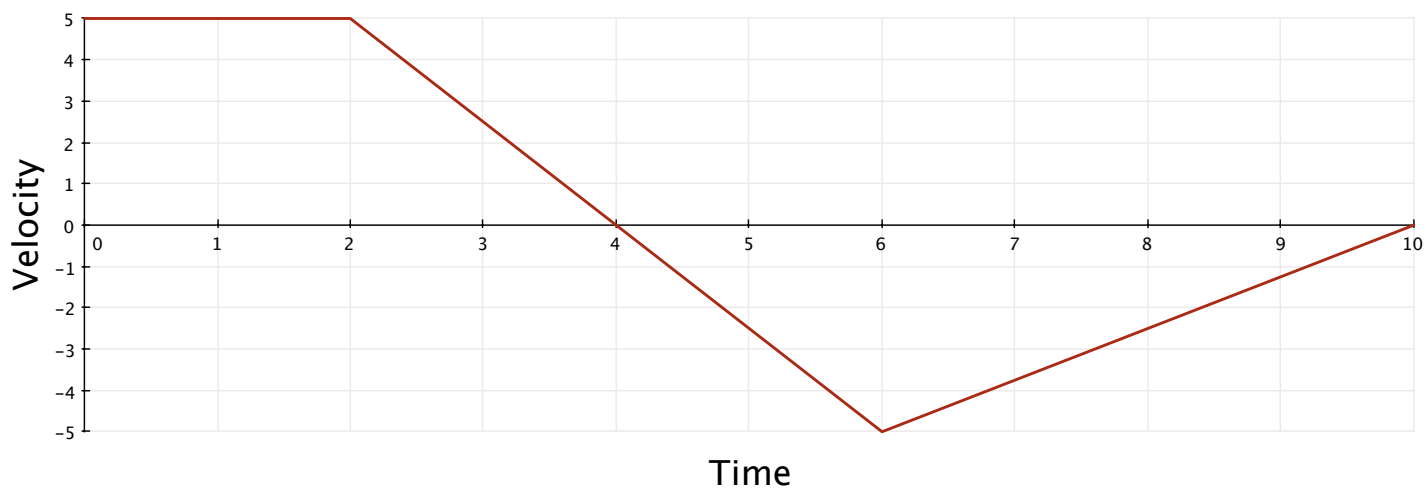
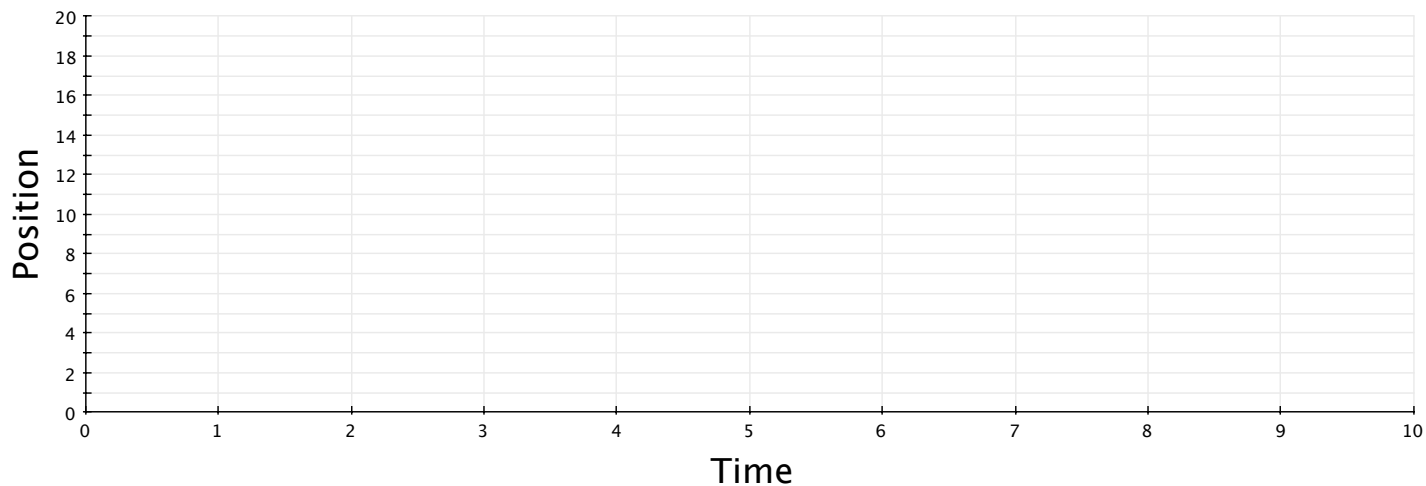
Motion Graph Quiz

Sketch the missing motion graphs.



Motion Graph Quiz

Sketch the missing motion graphs.



Motion Graph Quiz

Sketch the missing motion graphs.

