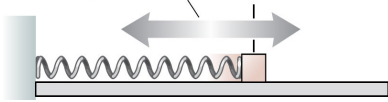


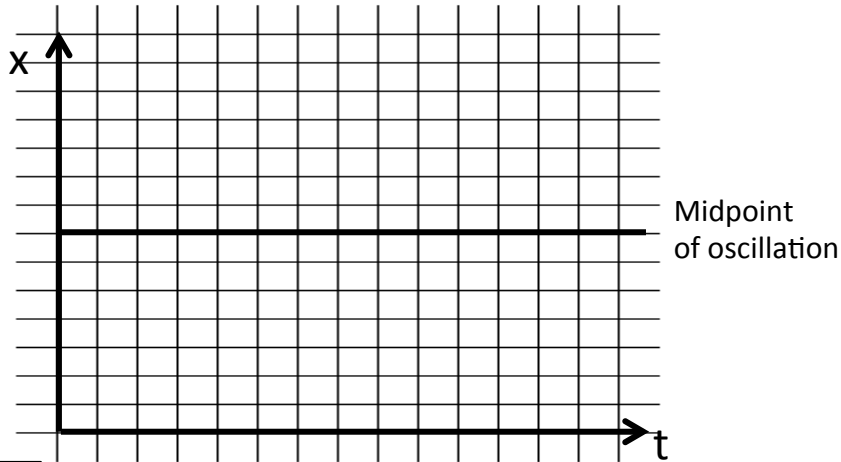
Quiz 1B (Green): Motion

1

Simple harmonic motion of block

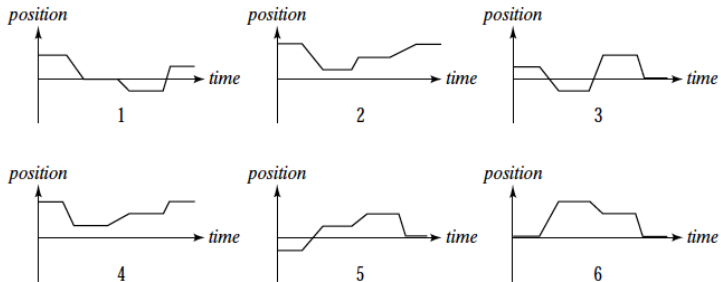
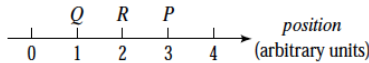


Sketch position vs time for the block oscillating back and forth. (3 pts)



2

A person initially at point Q in the illustration stays there a moment and then moves along the axis to P and stays there for a moment. She then moves to R, stays there a moment, and then runs quickly back to Q. Which of the position vs. time graphs below correctly represents this motion? (3 pts)



A rocket was launched straight up with constant acceleration. Few seconds after liftoff, a bolt falls off the side of the rocket. The bolt hits the ground several seconds later. Draw a complete **motion diagram** of the bolt from the point of launch until it hits the ground. Note that the bolt is still moving upward when it detaches from the rocket! Be sure to show the acceleration at the lowest point when it hits the ground. (4pts)

Highest point reached by bolt

Bolt detaches from rocket

Ground