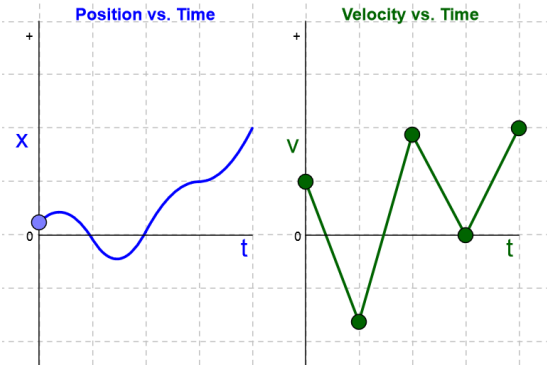
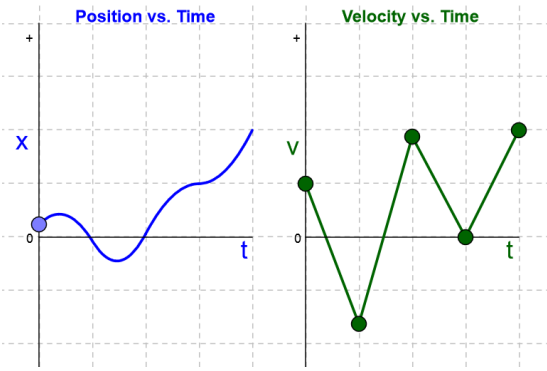
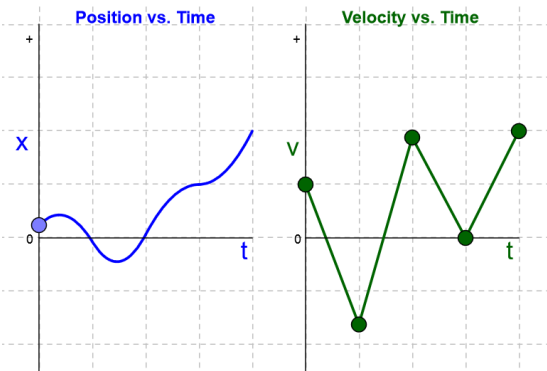
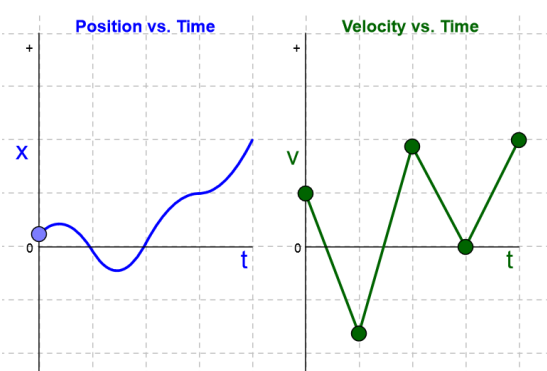
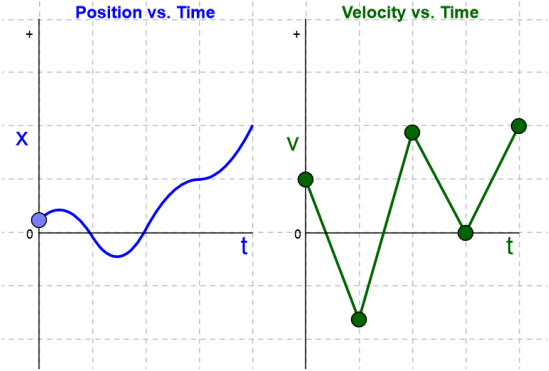
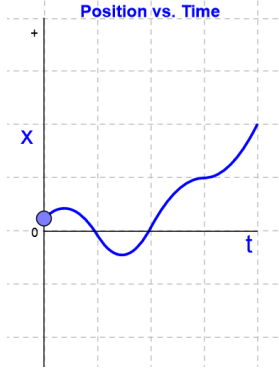
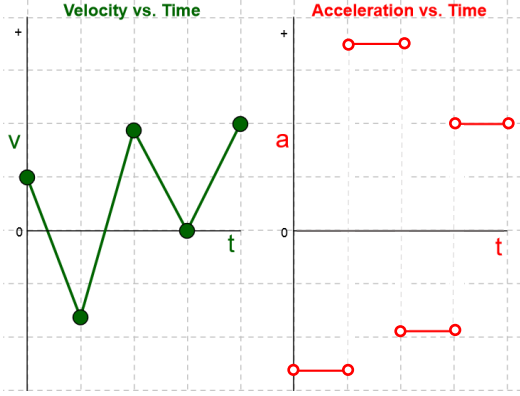
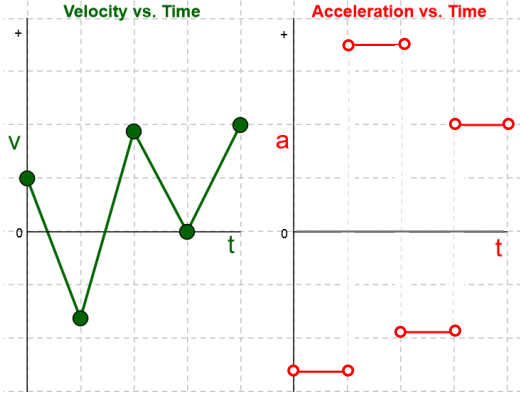
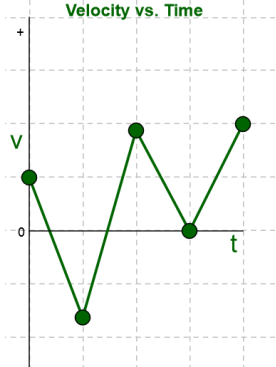
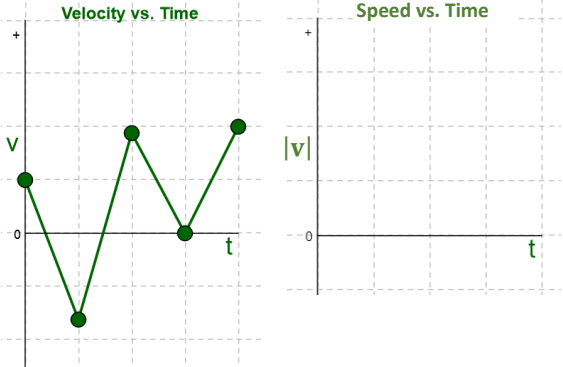
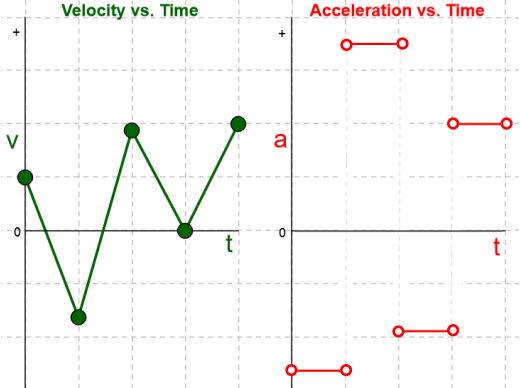
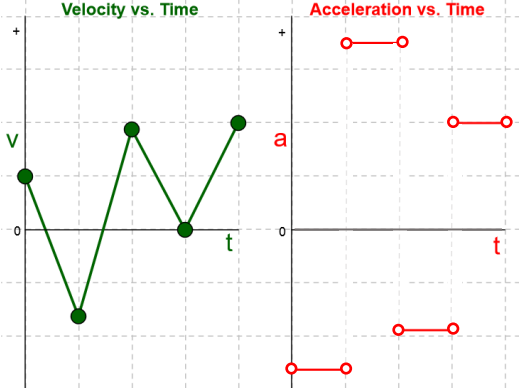


Particle Motion (along x -axis or y -axis)

When you read...	Think...	See...
Initially		
Particle is at rest OR Particle is not moving		
Particle is moving right (forward)		
Particle is moving left (backward)		

When you read...	Think...	See...
Particle changes direction		 <p>The figure shows two graphs side-by-side. The left graph is titled "Position vs. Time" and has a vertical axis labeled "X" and a horizontal axis labeled "t". A blue curve starts at the origin (0,0), dips below the t-axis, crosses it, and then rises above it. The right graph is titled "Velocity vs. Time" and has a vertical axis labeled "v" and a horizontal axis labeled "t". A green piecewise linear function starts at a positive value, crosses the t-axis, reaches a negative minimum, crosses the t-axis again, reaches a positive maximum, crosses the t-axis a third time, reaches a negative minimum, and crosses the t-axis a fourth time. The points where the velocity is zero correspond to the points where the position curve changes direction.</p>
Velocity at $t = a$		
Average Velocity on $[a, b]$		 <p>The figure shows a "Position vs. Time" graph with a vertical axis labeled "X" and a horizontal axis labeled "t". A blue curve starts at the origin. A secant line is drawn between two points on the curve, representing the average velocity over that interval.</p>
Velocity is increasing		 <p>The figure shows two graphs side-by-side. The left graph is titled "Velocity vs. Time" with a vertical axis labeled "v" and a horizontal axis labeled "t". A green piecewise linear function starts at a positive value, dips, rises to a higher peak, dips, and rises to an even higher peak. The right graph is titled "Acceleration vs. Time" with a vertical axis labeled "a" and a horizontal axis labeled "t". A red step function shows positive acceleration during the intervals where the velocity is increasing.</p>
Velocity is decreasing		 <p>The figure shows two graphs side-by-side. The left graph is titled "Velocity vs. Time" with a vertical axis labeled "v" and a horizontal axis labeled "t". A green piecewise linear function starts at a positive value, dips, rises to a higher peak, dips, and rises to an even higher peak. The right graph is titled "Acceleration vs. Time" with a vertical axis labeled "a" and a horizontal axis labeled "t". A red step function shows negative acceleration during the intervals where the velocity is decreasing.</p>

When you read...	Think...	See...
Acceleration at $t = c$		
Average acceleration on $[c, d]$		 <p style="text-align: center;">Velocity vs. Time</p>
Speed		 <p style="display: flex; justify-content: space-around;"> Velocity vs. Time Speed vs. Time </p>
Speed is increasing (particle is speeding up)		 <p style="display: flex; justify-content: space-around;"> Velocity vs. Time Acceleration vs. Time </p>
Speed is decreasing (particle is slowing down)		 <p style="display: flex; justify-content: space-around;"> Velocity vs. Time Acceleration vs. Time </p>