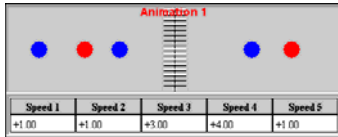


Worksheet for Exploration 8.1: Understanding Conservation Laws



Observe the animation to see if you can discover any conservation laws. You should determine whether your laws hold for the left half of the animation, the right half animation, or the entire animation. Properties that you might want to consider are number of particles, color, and sum of the particle speeds. [Restart](#).

The animation will run for 100 seconds.

- i. For animation 1 play the simulation, then restart and record speeds before and after collisions while stepping through several collisions. You may start stepping through at any time, you do not need to catch the first collision.

	Speed 1	Speed 2	Speed 3	Speed 4	Speed 5	Sum
col1						
2						
3						
4						
5						
6						

- ii. What conservation law can you come up with for animation 1?

iii. Do again for animation 2.

	Speed 1	Speed 2	Speed 3	Speed 4	Speed 5	Sum
col1						
2						
3						
4						
5						
6						

iv. Describe interactions that you may have observed between objects in animation 2.