



# Linear Momentum

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## Theory

- ▶ Linear momentum of an object of mass  $m$  moving with velocity  $\vec{v}$  is  $\vec{p}=m\vec{v}$
- ▶ The total linear momentum for a system of objects is conserved in a collision (Since momentum is a vector the vector sum of the momentum of each object before a collision should equal the vector sum of the momentum of each object after the collision)
- ▶ Mechanical energy is not conserved in a collision

## Tips

- ▶ Avoid touching the metal parts of the spheres due to danger from the high voltage spark timers
- ▶ Keep track of which spark trails came from which spheres and in which direction they were traveling



# Linear Momentum Data

