

At the end of this worksheet you should be able to

- find the momentum of an object or collection of objects.
- find the change in momentum of an object or collections of objects due to an impulse.
- use the conservation of momentum to solve for an unknown quantity.
- use the principle of relative velocity to solve for an unknown in elastic collisions.

Note that at in every problem this week we will be ignoring friction and air resistance. Its not that momentum can't work with those quantities, but momentum does not really help tell us anything new about them, so our problems will not involve friction unless explicitly specified. When using the conservation of momentum in this way, we really restrict ourselves to talking about the motion of the objects *just before* they collide as well as *just after* they have stopped colliding.