**Noteguide for Conservation of Momentum - Videos 6E Name**

**Part 1 - Why Momentum must be conserved**

Write down a proof that momentum must be conserved:



Example: 60. kg Sally going 4.5 m/s collides head on with 80. kg Bob who is going 2.3 m/s.

Three steps: The diagram and problem

**Part 2 - Do the first four example problems below the first video: See if you can figure them out first, but if you can't, play the video...**

**Example 1**



(2.3 m/s)

**Example 2**



(-4.7 m/s)

(left)

**Example 3**



(1.73 m/s)

**Example 4**



(11.9 m/s)