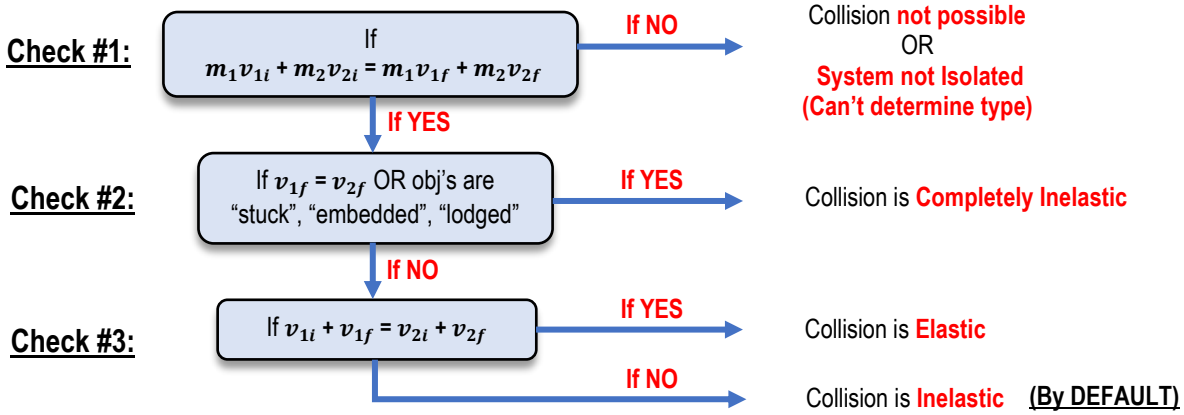
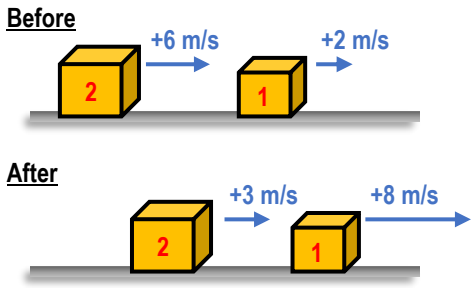
CONCEPT: HOW TO IDENTIFY THE TYPE OF COLLISION

- When problems ask to identify the type of collision, we use a series of "checks" based on the characteristics of each type:



EXAMPLE: Block **A** (2kg) moves to the right at 6m/s and collides with Block **B** (1kg) moving right at 2m/s. After the collision, **A** moves to the right at 3m/s and **B** moves to the right at 8m/s. Determine the type of collision that occurred.



A) Collision Not Possible
B) Completely Inelastic
C) Elastic
D) Inelastic

PROBLEM: Two toy carts collide head-on on a frictionless surface. Cart **A** has a mass of 0.50 kg and an initial velocity of 2m/s. Cart **B** has a mass of 0.30kg and initial velocity –2m/s. After the collision, the final velocities of **A** and **B** are –1m/s and 3m/s, respectively. What type of collision was this?