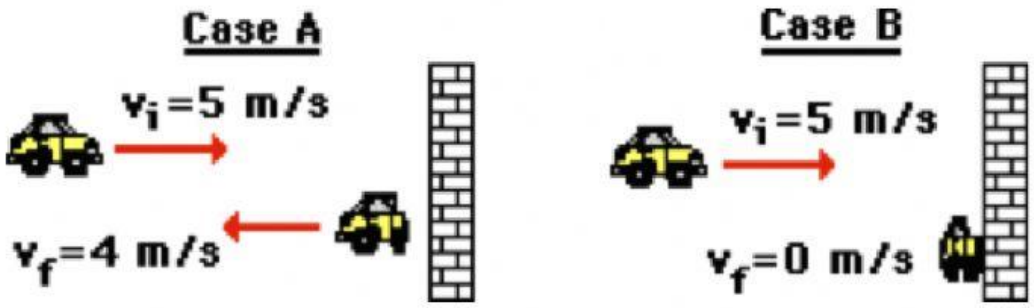
MOMENTUM/ IMPULSO
QUIZ

NAME: _____ **DATE:** _____

Consider the diagram at the right for the next three questions. The diagram depicts Before and After velocities of an 800-kg car in two different collisions with a wall. In case A, the car rebounds upon collision. In case B, the car hits the wall, crumples up and stops. Assume that the collision time for each collision is the same.



(**10 points**)In which case does the car experience the greatest momentum change?

a. Case A
b. Case B
c. Both the same
d. Insufficient information

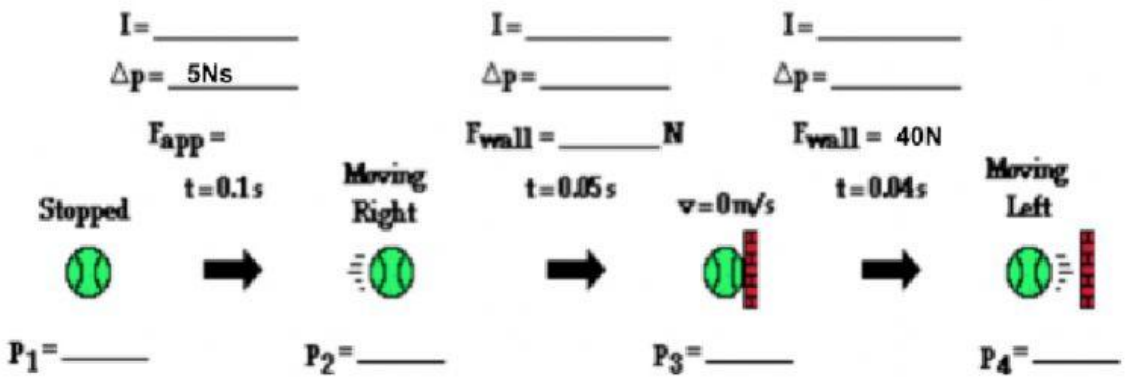
(**10 points**)In which case does the car experience the greatest impulse?

a. Case A
b. Case B
c. Both the same
d. Insufficient information

(**10 points**)The impulse encountered by the 800-kg car in case A has a magnitude of ___ N•s.

a. 0
b. 800
c. 3200
d. 4000
e. 7200
f. Not enough information to determine.

(**36 points**)A tennis ball is at rest when it experiences a forward force to set it in motion. It then strikes a wall where it encounters a force that slows it down and finally turns it around and sends it backwards.



A large truck and a Volkswagen (VW) beetle have a head-on collision.write Truck ,VW or both the same

(**6 points**)Which object experiences the greatest force?

(**6 points**)Which object experiences the greatest impulse?

(**6 points**)Which object experiences the greatest momentum?

(**6 points**)Which object experiences the greatest acceleration?

(**10 points**) Determine the post-collision velocities of the following objects or combination of objects. m/s