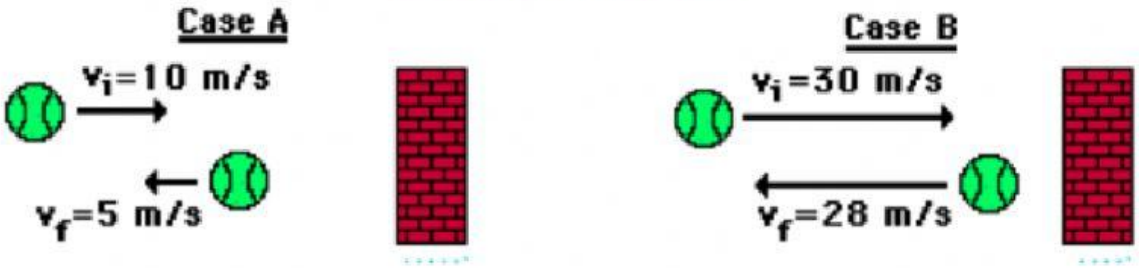
MOMENTUM/ IMPULSO
QUIZ

NAME: _____ **DATE:** _____

Consider the diagram at the right for the next three questions. The diagram depicts Before and After velocities of a ball of 1kg in two different collisions with a wall. Assume that the collision time for each collision is the same.

Vector Diagram



(**5 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

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

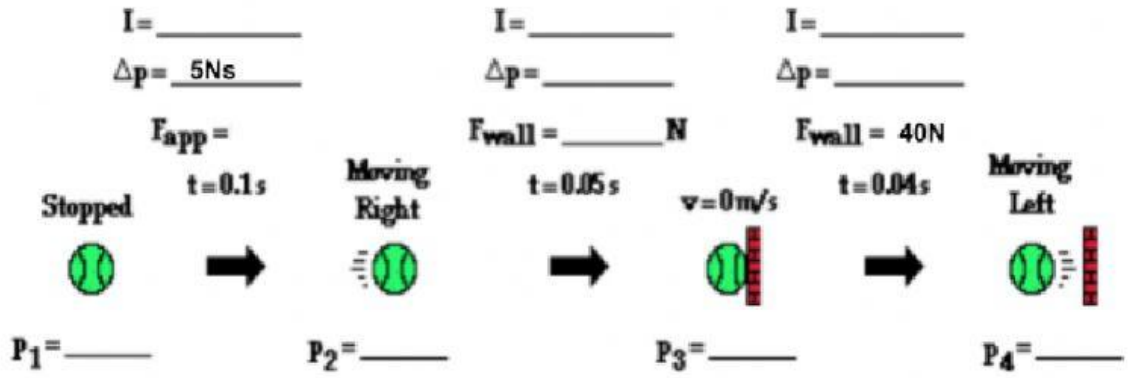
a. Case A
b. Case B
c. Both the same
d. Insufficient information

(**5 points**)The impulse encountered by the 1-kg ball in case A has a magnitude of ___ N•s.

a. 0
b. 5
c. 30
d. 15
e.10
f. Not enough information to determine.

LIVEWORKSHEETS

(**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

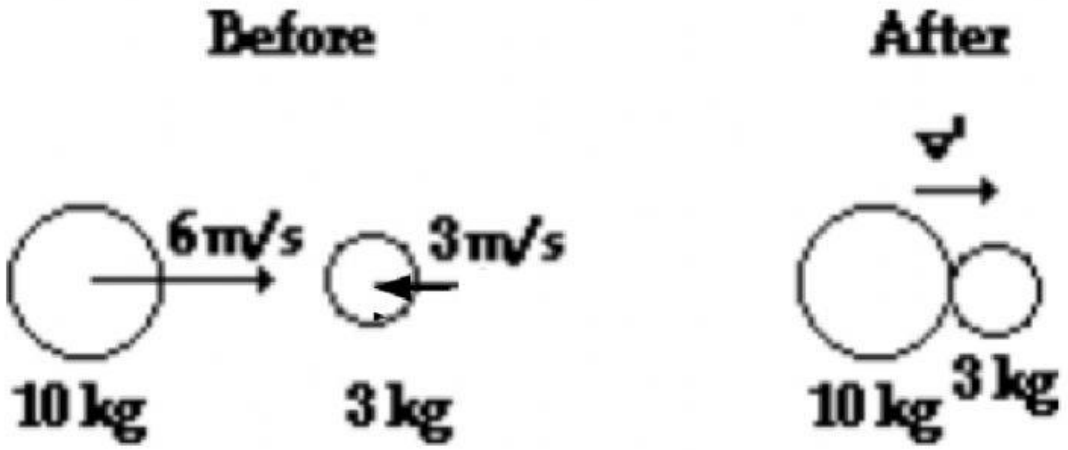
(**5 points**)Which object experiences the greatest force?

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

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

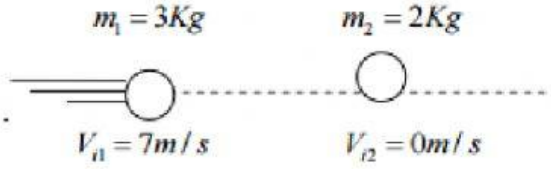
(**5 points**)Which object experiences the greatest acceleration?

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



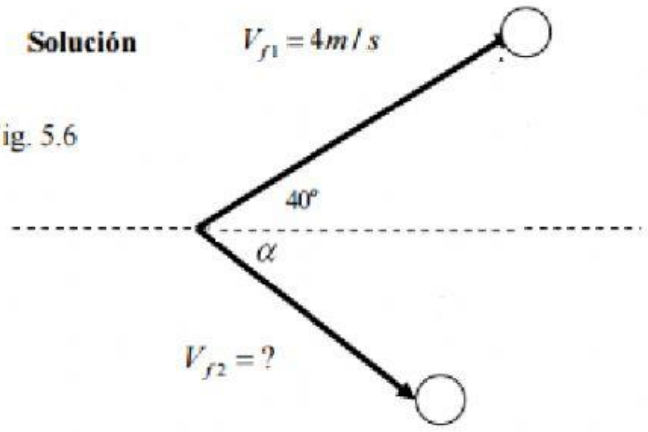
LIVEWORKSHEETS

(**20 points**) Una bola de masa m1 = 3 Kg se mueve a razón de 7 m/s, dirigiéndose hacia otra de masa m2 = 2 Kg que se encuentra en reposo. Después del impacto, la bola m1 se mueve a 4 m/s formando un ángulo de 40° como se muestra en la figura. Encuentre la magnitud y dirección de la velocidad de la bola de m2 m/s Grados al



Solución

Fig. 5.6



LIVEWORKSHEETS