Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ End Of Chapter 7 Questions

Review Questions (Page 99)

1a. Heavy Truck 1b. Rolling Skate board (truck not moving)

2. Increase (I=Force x Time)

3. Impulse equals the change in momentum

4a. If time is doubled, impulse is doubled 4b. Change in momentum is also doubled

5a. Impulse is quadrupled 5b. Momentum is quadrupled

6. F=mv/t so the longer time make the force smaller

7. The force is quartered (1/4 times)

10. The force is bigger because the change in momentum is greater (velocity not only has to stop, it has to move back in the direction it came)

12. The direction is important

13. Since the momentum is zero before it is fired, the momentum of the gun and bullet must cancel (be equal and opposite)

14. No, the rifle obtains an equal momentum in the opposite direction so the total momentum is still zero.

15. That the total amount of momentum in a closed system remains the same as long as there is no external force that changes it

17. Elastic means no heat is lost, no sound is generated, and there is no lasting deformation of materials. Inelastic has a lasting deformity, heat and sound are generated.

Think and Explain (Page 100)

1. You because when the bike stops, your body keeps moving. It takes greater effort to stop the momentum of the heavier object.

2. The sagging sheet increases the time of impact, lessening the force applied to the egg. F= mv/t

3. Impulse and change and momentum are the same. The force is less if the time is increased. The floor with give has a greater time of impact.

5a. True

5b. True

5c. False

5d. True

9. 5/6 m/s or .83 m/s

20/21 m/s or .952 m/s