Study Guide: Ch. 3, Momentum

Answer the following questions and study the following topics to prepare for the upcoming multiple choice quiz. Note you must know all relevant units.

1) Calculate the momentum of a 1000kg car moving at 30m/s.

2) How is momentum related to impulse? How is impulse related to force? How is momentum then related to force?

3) If momentum is changed over a long time, what can be said about the corresponding force? What if momentum is changed over a short time?

4) Why is a karate expert more likely to break a pile of brick with a karate chop that contacts the brick for a very short time.

5) Summarize the Law of Conservation of Momentum.

6) If you are standing a skateboard and throw a ball in front of you, what will be your resulting motion? Use Conservation of Momentum.

7) A 1000kg car travels north at a speed of 20m/s. A 1200kg car travels south at a speed of 15m/s. If they collide and entangle, in what direction will the wreckage travel? Use Conservation of Momentum.