**Week 8 Reading Questions**

Monday: Chap 8.1-3

1) What is the mathematical definition of linear momentum? Is it a scalar or vector quantity?

2) How can Newton’s 2nd law for a single particle be re-written in terms of momentum?

3) What is impulse?

4) Compare the integral definitions of impulse and work that are essential when forces are not constant. What do you see as the main differences between them? How do the units of impulse or momentum compare to units for work or energy?

Tuesday: 8.4

**RQ9 in MasteringPhysics**

5) What quantities are conserved in an elastic collision? How is an inelastic collision different? What happens in a completely (or totally) inelastic collision?

6) Work out the details presented in eqns 8.19-8.25 yourself.

Wednesday: TEST!

Thursday: Chap 8.5-6

7) I have three masses placed along the x-axis. m1 = 5 kg is at x=0; m2 = 4 kg is at x=1 m; m3 = 2 kg is at x=2 m. Where is the center of mass? To put the center of mass at x=0, where should m1 be moved to?

8) Using the data in figure 8.33, what is the thrust force of the rocket engine?