Homework 1
DUE AT START OF CLASS ON TUE OCT 6

1. Give an example of a “body” that travels a large distance in some athletic activity, but has a relatively small net displacement (remember that a “body” could be a person, part of a person, a ball, etc.) Make a sketch illustrating your example and label the distance traveled and net displacement.

2. Given a sports example of a “body” whose velocity and acceleration vectors point in opposite directions. Make a sketch illustrating your example with two arrows showing the velocity and acceleration vectors.

3. Look at Figure 3-4 of the textbook (“Blocking in volleyball”). For each of the frames (a)-(e), answer the following questions:
   (a) Is her velocity vector zero, pointing upwards, or pointing downwards?
   (b) Is her acceleration vector zero, pointing upwards, or pointing downwards?

4. Give an example of projectile motion in some athletic activity where the projectile is a person. Describe the relative importance of range and and height for this motion. What is the approximate launch speed of the projectile in meters per second (m/s)? Are the start and end points of the projectile motion at the same heights?

5. Give an example of projectile motion in some athletic activity where the projectile some piece of equipment. Describe the relative importance of range and and height for this motion. What is the approximate launch speed of the projectile in meters per second (m/s)? Are the start and end points of the projectile motion at the same heights?