1. (4 pts) You should have your name, section, “EF 151 Exam 1”, and date on your equation sheet. Also be sure that your name and section are on the cover sheet of this exam. Be sure to turn your equation sheet in with your exam — do not staple.

2. (6 pts) The area of a basketball court is 4700 sq ft. One Martin is 1.9558 meters. Determine the area of a basketball court in square Martins.

3. (6 pts) Express the vector 705 ft at 120° CCW from the positive x-axis in component \((i,j)\) format.

4. (14 pts) A BOBI walks 20m to the south, 40m to the west, and then 80m at 25° north of east. How far and in what direction does the BOBI have to walk to get back to his starting point?

5. (14 pts) Determine the magnitude of the sum of the two vectors.
6. (14 pts) An object starts at \((4t - 10)/t\) ft with a velocity of \((3t + 7)/t\) ft/s and is subjected to constant acceleration of \((-2t + 6)/t^2\). Determine the speed of the object when it is at its maximum x position.

7. (14 pts) A particle has an initial position of 27 meters, an initial velocity of \(-18\) m/s, and is subjected to a constant acceleration of \(36\) m/s\(^2\) for 0.8 seconds. All motion is in a straight line. Determine the final position and velocity of the particle.

8. (14 pts) Based on the graphs below, determine the velocity and acceleration of the object at \(t=8\) seconds. Show your work.

9. (14 pts) An object starts with a speed of 10 ft/s and speeds up at a constant rate of 3.0 ft/s\(^2\) for 94 ft. The object then slows down to a stop at a constant rate over a distance of 121 ft. Determine the total time the object traveled.