Physics 221 answers to even problems Fall/09
{Answers are usually given to 2 sig. figures {except in cases where # starts with a 1} (660 m means between 655m and 665m). Do not give more than 3 sig. figures in an answer (2 is okay). (the book uses 9.80 N/kg for gravitational field at earth's surface while I use 9.81 N/kg --you may use either){odd answers are in back of book}

1st HW assignment;
page 1B  1. 109 \hat{i} \text{ m/s} 4. -13.6 \hat{j} \text{ m/s}
#2-36 a. 250 m  b. 40. m/s   c. ... d. ... #2-52 a. at about 1.3 ms, ...
b. \sim 2.4 \text{ mm}   c. \sim \{1000, 2000, -10 \} \text{ m/s}^2   d. \sim \{.08, .6 , 1.2\} \text{ mm}
#2-82 a. 1.99 \text{ km}   b. 34 s  c. -198 \text{ m/s}
AP#1 a. 1.59 s  b. (I used a table to find the answer here)

2nd HW assignment;
page 2B 2. 30. \text{ m/s} \at \angle 53^\circ \text{ S of E} 3. 180. \text{ m/s} \at \angle 39^\circ \text{ W of N}, ...
#1-74 2.8 \text{ km} \at \angle 62^\circ \text{ N of E}, ...  #3-38 \{.75 , 1.47 \} \text{ h}
#3-42 a. 28^\circ \text{ N of E} b. 3.7 \text{ m/s}  c. 220 \text{ s}
#3-76 a. \{120. , 420 \} \text{ m}   b. 197 \text{ m}  c. 6.5^\circ \text{ upstream}, 4.03 \text{ min}, 407 \text{ m}, ...
AP#2 a. directly across the river, 50.\text{ s}  c. 53^\circ \text{ upstream}, ...

3rd HW assignment;
Page 3B 1. ... , 1.94 \text{ m/s}^2 3. ... , 14.5 \text{ N}
#4-14 a. (0.0, 2.0)\text{s} 11\text{ N}  b. (2.0, 6.0)\text{s} 0.0 \text{ N}  c. 2.75 \text{ N}
#4-52 a. FBD, ... b. 590 \text{ N}  c. 2.15 \text{ kN}
AP#3 a. 7.4 \text{ km}  c. after falling for 22. minutes (rather long)

1st test overview;(10/23/09)(much like last year's 1st test)
{ 46 pts in class and 4 pts take home }
I.(14pts). A.(2pts) describe and discuss (chosen from pages 1A, 2A, 3A, and the homework text questions)
   B.(12pts) a 2-dim vector problem (will use velocity vectors and will have a relative velocity part to it)(like page 2B)
II.(15pts) a free fall problem (like last year's 1st test and 1B)
III.(15pts) A "2nd law" problem (like page 3B & last year's test)
IV.(2pts) Some variant of a problem from home work or class