Summer Assignment for AP Physics B

Due on the first day back to school

Read in Giancoli:

p. 6-15 (Error analysis, significant figures)

p. 19-40 (All of the kinematics [motion in one dimension] unit.

Answer, showing your work laid out neatly:

P. 16ff problem 1, 5, 15, 22, 30 (mower v=1 km/hr, width = 0.5 m), 38

p. 41ff question 11, 12, 14, 16. Problem 7, 14, 24, 30, 36, 49.

In addition, please complete the following free-response problem, giving a clear sense of how each part is solved:

The influence of gravity on the motion of objects is predictable under ideal conditions.

a. At what velocity would a ball have to be thrown vertically from ground level so it remains aloft for exactly 3 minutes?
b. How could a precise stopwatch and a ball be used to measure the depth of a canyon?
c. How many seconds apart should two balls be released so that a ball being dropped from a height of H reaches the ground at the same time as a ball dropped from a height of 5H?