Math 1414
College Algebra
Lab Exercise # 9
Dr. Word

Name: _____ Date:_____

Section: _____ Semester: _____

Grade: _____

Attach computer printouts to this sheet and submit your assignment to your instructor.

In 1911, the world record time for the men's mile swim was 1043.04 seconds. The world record has decreased by approximately 0.4118 seconds each year since then.

5a. Write the general term for the arithmetic sequence modeling record times for the men's mile swim, where n = 1 corresponds to 1911.

5b. Use the model to predict the record time for the men's mile swim in the year 2002.

5c. A theater has 40 seats in the first row and each row, after the first had five more seats than the previous row. How many seat in the theater if it contains 30 rows?

A job pays a salary of $18,000 the first year , with a guaranteed raise of 5% each year. The model for the salaries beginning with the first year is $a_n = 18000(1.05)^{n-1}$.

5d. What is salary at the end of year 20?

5e. What is the total salary over the 20-year period?

College Algebra: **Lab #5**

*****If in doubt, Print it out!!*****

5a) Refer to textbook.

5b) Use you calculator to determine the value of a_n when n = (2002 – 1911+1). Remember you have to add 1 to it since 2002 counts as 1 full year as well.

5c) Create the equation using your textbook as reference. Is it arithmetic or geometric? Calculate when n = 30.

5d) Use your textbook to create the equation of a_n. Is it arithmetic or geometric? Solve for n = 20.

5e) Find S_n of the above equation, when n = 20.