ENGR 162 - Fall 2004

Lab WS 8: Comparing Economic Alternatives with Excel (1)


While the technical performance of an engineering design is usually the primary focus of the engineer's work, it is not the only consideration. Such factors as appearance (aesthetics), usability (ergonomics), customer preferences, and cost are often as important or more so than technical performance in determining the success or failure of a product. Engineers frequently have to evaluate the economic consequences of various alternative solutions that are under consideration for adoption.

Often they must evaluate scenarios in which the expenditures (investment, costs, etc.) and income (return on investment, sales receipts, etc.) occur at different times. These cases require the use of "time-value-of-money" concepts, based on compound interest. Spreadsheets are ideal tools for this type of analysis.

ENGR162 Lab Assignment #8: Chap. 14

A. (12 points) Problem 1, pg. 376
B. (12 points) Problem 2, pg. 376
C. (12 points) Problem 5, pg. 377
D. (12 points) Problem 6, pg. 377
E. (12 points) Problem 8, pg. 378
F. (20 points) Problem 19, pg. 387
G. (20 points) Problem 20, pg. 387