**IENG323 Lab 02**

***NOTE:*** Students should send their work in an excel file to the ***behzad.sanaei@emu.edu.tr*** during the lab hour. Submission after 14:30 will not be accepted. Please check your internet connection, Microsoft excel and make sure you save your files regularly. File’s name must start with your student number.

1. For the cash flow revenues shown below, find the value of *G* that makes the equivalent annual worth in *years 1 through 7* equal to $500. The interest rate is 10% per year. (20 points)



1. For the cash flows shown (in $1000 units), calculate the value of *x* that makes the present worth in year 0 equal to $300,000 at an interest rate of 10% per year. (30 points)
2. Alternative R has a first cost of $100,000, annual M&O costs of $50,000, and a $20,000 salvage value after 5 years. Alternative S has a first cost of $175,000 and a $40,000 salvage value after 5 years, but its annual M&O costs are not known. Determine the M&O costs for alternative S that would yield a required incremental rate of return of 20%. Solve using the GoalSeek tool or RATE function on a spreadsheet. (50 points)