

## Assignment 4

80 Points (Due: 5:00PM Wednesday Feb. 24)

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Assessment Goals: (Interpolation, Geometric gradient series; Rate of return; Calculation accuracy)

Show your work. No round down or up, use 2 decimals for dollar values and 4 decimals for factors. Use tables from your textbook only, no formula.

### **PROBLEM:**

For a project with annual compounding interest rate of 11.82%, the following information is provided:

\$4,800 initial investment

\$3,980 investment in year 1, decreasing by \$550 each year through year 5

\$3,509 annual withdrawal between years 4 through 9

\$15,085 withdrawal in year 11, decreasing by 16% annually through year 18

\$1,848 investment in year 14

\$19,870 withdrawal in year 20

- (1) Find out the future worth of the cash flow at the end of the project (30 pts)
- (2) What is the geometric gradient series between years 4 to 12 with 10% annual increase that is equivalent to the project? (20 pts)
- (3) What is the real rate of return of the project? (30 pts)