

S5-1 Redo Problem 6.21 assuming a study period of (a) 5 years and (b) 10 years. To clarify, what is required is to compare two policies in each of (a) and (b), to replace the loader every four years and every five years, while the study period is not over. At the end of the study period, the machine is salvaged. We have the following additional information. The loader salvage value after one year is \$36,000, \$32,000 after two years, and \$27,500 after three years.

S5-2. Redo problem S4-4 from Homework 4 supplement using AW.

S5-3. Rich-Folk Medical Center is considering acquiring a new medical imaging machine. The initial cost of this machine is \$100,000. It will have an operating cost of \$25,000 in Year 1, increasing by \$5,000 per year. Income will be \$70,000 in Year 1, decreasing by \$4,000 each year. The machine will last six years. The cost for disposing of the machine at the end of its useful life is \$2,000. What ROR will RFMC make from the machine? Solve by hand and by Excel.

S5-4. An engineering firm is considering undertaken a project. The net cash flows for this project are shown below. Also shown is the plot of the present value (PV) of the project as a function of the interest rate ( $i$ , which is **not** given as a percentage value; e.g., 0.2 means 20%). The firm's MARR is 14% per year.

- (a) On the basis of PW criteria, should the firm select the project?
- (b) On the basis of ROR criteria, should the firm select the project?
- (c) Would you undertake this project?

Year	Cash Flow (\$)
0	5,000
1	-6,000
2	1,000
3	-6,000
4	-8,000

