**IE 260 CLASS EXERCISES - WEEK 7**

1. Determine the current amount of money that must be invested at 12% nominal interest, compounded monthly, to provide an annuity of $10,000 (per year) for 6 years, starting 12 years from now. The interest rate remains constant over this entire period of time.
2. Mr. A is considering investing $370,000 in a business. This business will help him to make $80,000 at the end of the first year, and $100,000 for the following 4 years. The MARR is 10%.
3. Draw the cash flow diagram of the business.
4. Calculate the IRR of the business.
5. Should Mr. A invest in the business?
6. The world’s largest carpet maker has just completed a feasibility study of what to do with the 16,000 tons of overruns, rejects, and remnants it produces every year. The company’s CEO launched the feasibility study by asking, why pay someone to dig coal out of the ground and then pay someone else to put our waste into a landfill? Why not just burn our own waste? The company is proposing to build a $10-million power plant to burn its waste as fuel, thereby saving $2.8 million a year in coal purchases. Company engineers have determined that the wasteburning plant will be environmentally sound, and after its four-year study period the plant can be sold to a local electric utility for $5 million. (MARR=10%)
7. Calculate the IRR of the plant.
8. Should the plant be built?