Tutorial 7

#1:
Suppose a project has conventional cash flows and a positive NPV. What do you know about its payback? Its discounted payback? Its profitability index? Its IRR? Explain.

#2:
Mahjong, Inc., has identified the following two mutually exclusive projects:

Year	Cash Flow (A)	Cash Flow (B)
0	-$43,000	-$43,000
1	23,000	7,000
2	17,900	13,800
3	12,400	24,000
4	9,400	26,000

a. What is the IRR for each of these projects? Using the IRR decision rule, which project should the company accept? Is this decision necessarily correct?
b. If the required return is 11%, what is the NPV for each of these projects? Which project will you choose if you apply the NPV decision rule?
c. Over what range of discount rates would you choose Project A? Project B? At what discount rate would you be indifferent between these two projects? Explain.

#3:
Consider the following two mutually exclusive projects:

Year	Cash Flow (A)	Cash Flow (B)
0	-$300,000	-$40,000
1	20,000	19,000
2	50,000	12,000
3	50,000	18,000
4	390,000	10,500

Whichever project you choose, if any, you require a 15% return on your investment.
a. If you apply the payback criterion, which investment will you choose? Why?
b. If you apply the discounted payback criterion, which investment will you choose? Why?
c. If you apply the NPV criterion, which investment will you choose? Why?
d. If you apply the IRR criterion, which investment will you choose? Why?
e. If you apply the profitability index criterion, which investment will you choose? Why?
f. Based on your answers in (a) through (e), which project will you finally choose? Why?

#4:
Slow Ride Corp. is evaluating a project with the following cash flows:

Year	Cash Flow
0	-$16,000
1	6,100
2	7,800
3	8,400
4	6,500
5	-5,100

The company uses a 10 percent interest rate on all of its projects. Calculate the MIRR of the project using the combination approach.

#5:
The Yurdone Corporation wants to set up a private cemetery business. According to the CFO, Barry M. Deep, business is "looking up." As a result, the cemetery project will provide a net cash inflow of $85,000 for the firm during the first year, and the cash flows are projected to grow at a rate of 6 percent per year forever. The project requires an initial investment of $1,400,000.

a. If Yurdone requires a 13% return on such undertakings, should the cemetery business be started?
b. The company is somewhat unsure about the assumption of a 6% growth rate in its cash flows. At what constant growth rate would the company just break even if it still required a 13% return on investment?

#6:
What is the NPV of a publicly listed common stock? Of a bond? Given your answers, would you purchase a common stock and/or a bond?

#7:
Joe is considering a project that requires $90,000 for initial investment. The project generates revenues of $X every year for 6 years. The payback for the project is 4.5 years. The NPV for the project is $2,457.59. What is the discounted payback for this project?