1. Here is a variation of the Monty Hall game. The contestant faces four doors. Behind one door is the prize. The other doors lead to empty rooms. The contestant chooses one door. The master of ceremonies then opens two doors that lead to empty rooms, but by rule he does not open the chosen door and he does not open the prize door. Now the contestant has an opportunity to switch her choice of doors.

A. In words, why is it best for the contestant to switch doors?

B. What is the probability of winning the prize if the contestant does not switch? What is the probability of winning the prize if the contestant does switch? Explain.

2. Read Chapter 13 (and elsewhere) in "The Smartest Guys in the Room." Explain the following. You should illustrate your answer to part c in a diagram or use a numerical example.

a. Why did Enron want to conceal debt?

b. How did the LJM partnership conceal Enron debt?

c. How did the LJM partnership generate such large returns for Fastow.
3. (Like 7.8 in the text) A firm is considering a marketing project that involves buying a software package to coordinate retail sales and inventory. The package costs $800,000 and will be depreciated down to zero using the straight-line method over three years. The salvage value is zero. Planners for the firm predict that as a result of the new software, sales revenues will be increased by $600,000 per year for the next three years, after which the market for which the software is designed will cease to exist. Cost of goods sold and operating expenses for the increased sales are 25% of the increased sales revenues. The firm needs to add net working capital of $40,000 which will be recovered in full at the end of three years. The corporate tax rate is .34 and the required rate of return is .15. Tax shields are always valuable because the firm has other sources of profit. Show that the net present value of the project is $71,43092.

4. (Like problem 8.1 in the text.) Active Radiation Inc. has designed a new drug to treat the common cold. If it markets the drug immediately there is a 60% chance of a successful launch, in which case the present value of the payoff is $1 billion, and there is a 40% chance of an unsuccessful launch yielding a present value of $100 million. Alternatively, the firm could delay the launch by one year and in that time, at a cost of $160 million, it could test market the drug and thereby improve the probability of a success to 90%. The rate of discount is twenty percent (.2). Should the firm launch immediately or spend a year (and some money) in redesigning the product? Illustrate and explain, of course.