Maria Rojas is considering the possibility of opening a small dress shop on Fairbanks Avenue, a few blocks from the university. She has located a good mall that attracts students. Her option are to open a small shop, a medium-sized shop, or no shop at all. The market for a dress shop can be good, average or bad. The probabilities for these three possibilities are 0.2 for a good market, 0.5 for an average market, and 0.3 for a bad market. The net profit or loss for the medium-sized and small shops for the various market condition are given in the following table. Building no shop at all yield no loss and no gain.

a. What do you recommend?

b. Calculate the EVPI

c. Develop the opportunity loss table for this situation. What decisions would be made using the minimax regret criterion and the minimum EOL criterion?

Alternative Good Market ($) Average Market Bad Market

Small Shop 75,000 25,000 -40,000

Medium-sized Shop 100,000 35,000 -60,000

No shop 0 0 0

Cal Bender and Becky Addison have known each other since high school. Two years ago they entered the same university and today they are taking under graduate courses in the business school. Both hope to graduate with degrees in finance. In an attempt to make extra money and to use some of the knowledge gained from their business courses. Cal and Becky have decided to look into the possibility of starting a small company that would provide word processing services to students who needed term papers or other reports prepared in a professional manner. Using a system approach, Cal and Becky have identified three strategies. Strategy 1 is to invest in a fairly expensive microcomputer system with a high-quality laser printer. In a favorable market, they should be able to obtain a net profit of $10,000 over the next two years. If the market unfavorable, they can lose $8,000. Strategy 2 is to purchase a less expensive system. With a favor market, they could get a return during the next two years of $8,000. With an unfavorable market, they would incur a loss of $4,000. Their final strategy, strategy 3, is to do nothing. Cal is basically a risk taker, whereas Becky tries to avoid risk.

1. What type of decision procedure should Cal use?
2. What type of decision maker is Betty? What decision would Betty make?
3. If Cal and Becky were indifferent to risk, what type of decision approach should they use?

Monica Britt has enjoyed sailing small boats since she was 7 years old, when her mother started sailing with her. Today, Monica is considering the possibility of starting a company produce small sailboats for recreational market. Unlike other mass-produced sailboats, however, these boats will be made specifically for children between the ages of10 and 15. The boats will be of the highest quality and extremely stable, and the sail size will be reduced to prevent problems of capsizing.

Her basic decision is whether to build a large manufacturing facility, a small manufacturing facility, or no facility at all. With a favorable market, Monica can expect to make $90,000 from the large facility or $60,000 from the smaller facility. If the market is unfavorable, however. Monica estimates that she would lose $30,000 with the large facility, and she would lose only $20,000 with the small facility. Because of the expensive involved in developing in initial molds and acquiring the necessary equipment to fiberglass sailboats for young children, Monica has decided to conduct a pilot study to make sure that the market for the sailboats will be adequate. She estimates that the pilot study will cost her $10,000. Furthermore, can be either favorable or unfavorable. Monica feels that there is a 0.65 chance that the pilot study will be favorable. Of course, Monica could bypass the pilot study and simply make the decision as to whether to build a large plant, small plant, or no facility at all. Without doing any testing in a pilot study, she estimates that the probability of a favorable market is 0.6. **What do you recommend? Compute the EVSI.**