Bowl Bound 3 Inc. is considering whether to build a new plant today at a cost of $100 million. There is a 30% chance that the plant will generate net cash flows of $20 million per year for 25 years and a 70% chance that the factory will generate net cash flows of $15 million per year for 7 years. In both cases, net cash flows would begin a year from today. For either level of net cash flows the factory could be shut down and sold a year from today (after net cash flows for the first year are realized) for $75 million. If net cash flows equal $20 million per year, the factory could be expanded at a cost of $30 million. The expansion would produce net cash flows of $3 million per year for 20 years. Assume the cost of capital for the project and the expansion equals 10%.

a. Sketch a decision tree of this capital budgeting decision.
b. Set up the calculations needed to determine whether the factory should be shut down and sold if sales equal $15 million next year. How would you make a decision?

Wall Street Journal Questions are on the back of this page.