

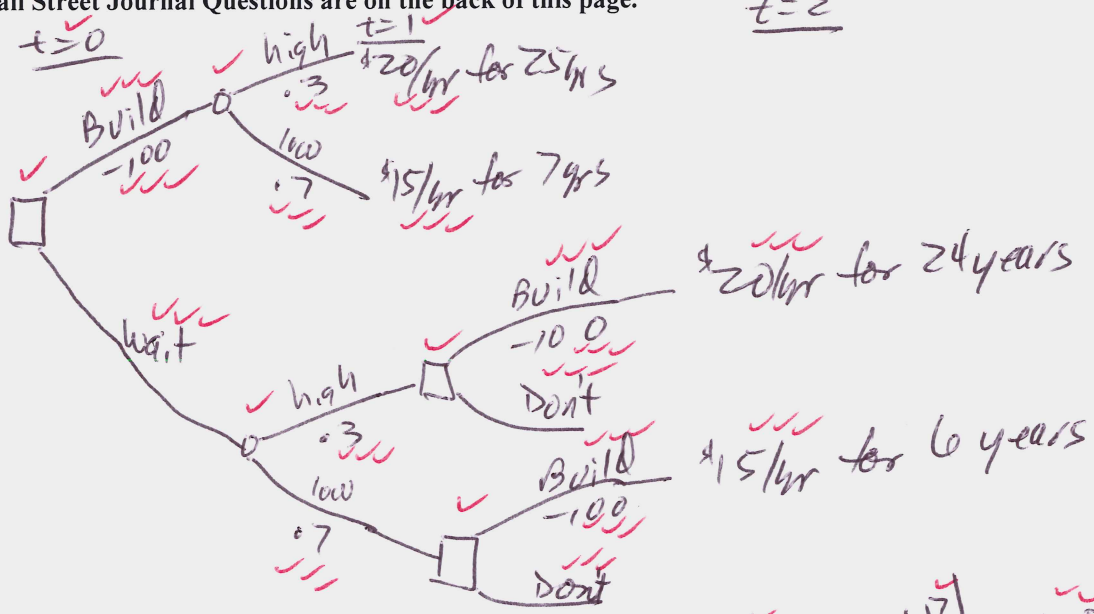
Bowl Bound 3 Inc. is considering whether to build a new plant today at a cost of \$100 million. There is a 30% chance that the plant will generate net cash flows of \$20 million per year for 25 years and a 70% chance that the factory will generate net cash flows of \$15 million per year for 7 years. In both cases, net cash flows would begin a year from today. However, rather than building today, Bowl Bound could wait a year to determine the size of the market for its product and thus will know whether net cash flows from the plant will equal \$20 million per year or \$15 million per year. Assume the cost of capital for the project equals 10%.

- Sketch a decision tree of this capital budgeting decision.
- Set up the calculations needed to determine the expected net present value of building today. How would you make a decision?

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

t=2

a.



b.
$$NPV(\text{Build}) = .3 \left(\frac{20}{.1} \left(1 - \left(\frac{1}{1.1} \right)^{25} \right) \right) + .7 \left(\frac{15}{.1} \left(1 - \left(\frac{1}{1.1} \right)^7 \right) \right) - 100$$

\Rightarrow Build if $NPV > 0$ & $> NPV$ of waiting

Scale (checks = points):

- | | | |
|---------|---------|---------|
| 91 = 75 | 52 = 69 | 39 = 65 |
| 68 = 74 | 49 = 67 | 35 = 60 |
| 65 = 73 | 48 = 68 | 31 = 55 |
| 57 = 71 | 46 = 67 | 19 = 46 |