- Sodaco is considering producing a new product: Chocovan soda.

- Sodaco estimates that the annual demand for Chocovan, **D** (in thousands of cases), has the following mass function: $P(\mathbf{D}=30) = .30$, $P(\mathbf{D}=50) = .40$, $P(\mathbf{D}=80) = .30$.

- Each case of Chocovan sells for $5 and incurs a variable cost of $3.

- It costs $800,000 to build a plant to produce Chocovan.

- Assume that if $1 is received every year (forever), this is equivalent to receiving $10 at the present time.

- Considering the reward for each action and state of the world to be in terms of net present value, use each decision criterion of this section to determine whether Sodaco should build the plant. (Winston, Operations Research Applications and Algortihms, 4th. Edition, Charpet 13, 2003)