

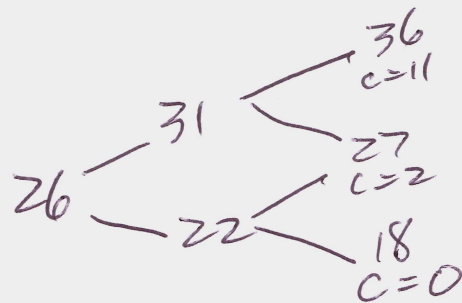
Fall 2012: Final B for 2:30 Class

$$P5 \quad 100 \rightarrow 20: \quad \overset{+12}{T^*} = 1 - \frac{(1 - .8(.35)) \overset{+10}{(1 - .25)} \overset{+4}}{1 - .45 \overset{+4}}{14}} = +0.01818$$

$$120 \rightarrow 150: \quad \overset{+12}{T^*} = 1 - \frac{(1 - .3(.35)) \overset{+10}{(1 - .25)} \overset{+4}}{1 - .45 \overset{+4}}{5}} = -0.22$$

\Rightarrow optimal interest = 120 million + 15

P6



$$S = 31: \quad \overset{+2}{\Delta} = \frac{\overset{+2}{11} - \overset{+2}{2}}{\overset{+2}{36} - \overset{+2}{27}} = 1$$

$$\overset{+1}{B} = \frac{\overset{+2}{2} - \overset{+2}{(1)} \overset{+2}{(27)}}{\overset{+2}{1.01} \overset{+2}} = -24.7525$$

$$\overset{+1}{C} = \overset{+2}{31} \overset{+2}{(1)} - \overset{+2}{24.7525} = 6.2475$$

$$S = 22: \quad \overset{+2}{\Delta} = \frac{\overset{+2}{2} - \overset{+2}{0}}{\overset{+2}{27} - \overset{+2}{18}} = 0.2222$$

$$\overset{+1}{B} = \frac{\overset{+2}{0} - \overset{+2}{(2222)} \overset{+2}{(18)}}{\overset{+2}{1.01} \overset{+2}} = -3.9604$$

$$\overset{+1}{C} = \overset{+2}{22} \overset{+2}{(2222)} - \overset{+2}{3.9604} = 0.9285$$

$$t=0: \quad \overset{+1}{\Delta} = \frac{\overset{+2}{6.2475} - \overset{+2}{0.9285}}{\overset{+2}{31} - \overset{+2}{22}} = 0.591$$

$$\overset{+1}{B} = \frac{\overset{+2}{0.9285} - \overset{+2}{(591)} \overset{+2}{(22)}}{\overset{+2}{1.01} \overset{+2}} = -11.954$$

$$\overset{+1}{C} = \overset{+2}{(0.591)} \overset{+2}{(26)} - \overset{+2}{11.954} = 3.412$$