Farkas Investments

You have recently been hired as a junior analyst at Farkas Investments. You have been given $4 million to invest over the next 3 years. At the beginning of each of the next 3 years, you can invest in one of two investments: A or B.

Investment	Cost ($ millions)	Profit ($ millions)	Probability
A	3	2	0.5
		-2	0.5
B	5	3	0.1
		-1	0.9

You are allowed to make at most one investment each year. Any additional money accumulated is left idle. You may not borrow money to invest; that is, you cannot buy into an investment if it costs more than you currently have.

Formulate a stochastic dynamic program to find an investment policy that maximizes the probability you will have at least $10 million at the end of 3 years.