Quiz B for 2:30 Class: 11/28/12 Name ____________________________

Assume your firm is considering whether or not to build a new factory. Your boss has asked you to determine the effect of being able to expand the factory later rather than building a larger factory today. Set up the calculations you would need to provide your boss with an answer.

Information on the factory:
Life of factory = 10 years;
Cost to build factory = $110,000
Present value today of the factory's cash flows: all 10 years = $100,000; first three years = $40,000; first two years = $30,000
Standard deviation of returns on factory: all 10 years = 45%; first three years = 50%; first two years = 60%
Proceeds if sell factory at any time over the next two years = $70,000

Information on possible expansion of factory:
Time over which it is possible to expand = three years
Cost of expansion = $50,000
Present value of expansion's cash flows: PV at the time of expansion = $45,000, PV today = $39,000
Standard deviation of returns on expansion: over next three years = 55%; over next eight years = 40%
Life of expansion = five years (once built)

Returns on U.S. Treasuries: 1-year = 3%; 2-year = 4%; 3-year = 5%; 5-year = 7%; 8-year = 9%; 10-year = 12%

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