Problem Set #8 Solutions

1. Semitool Corp has an expected excess return of 6% for next year. However for every unexpected 1% change in the market, Semitool's return responds by a factor of 1.2. Suppose it turns out the economy and the stock market do better than expected by 1.5% and Semitool's products experience more rapid growth than anticipated, pushing up the stock price by another 1%. Based on this information what was Semitool's actual excess return?

A. 7.00%
B. 8.50%
C. 8.80%
D. 9.25%

$$R_i = .06 + 1.2(.015) +.01 = .088$$

2. Stock A has a beta of 1.2 and Stock B has a beta of 1. The returns of Stock A are ______ sensitive to changes in the market as the returns of Stock B.

A. 20% more
B. slightly more
C. 20% less
D. slightly less

4. Which of the following correlation coefficients will produce the most diversification benefits?

A. -0.6
B. -0.9
C. 0.0
D. 0.4

5. A project has a 60% chance of doubling your investment in one year and a 40% chance of losing half your money. What is the standard deviation of this investment?

A. 25%
B. 50%
C. 62%
D. 73%

double investment = 100% return
lose half = -50% return

$$E(r) = .6(1) + .4(-.5) = 0.4$$

$$\sigma^2 = .6(1-.4)^2 + .4(-.5-.4)^2 = .54$$

$$\sigma = (.54)^{1/2} = .73484$$