**Quiz A for 2:30 Class: 10/09/13** Name ______________________________

**Short Answer 1 (15 points)**: Set up the calculations to determine the required return on Cutlucent Inc. if the correlation between Cutlucent and the market is +.4, the standard deviation of returns on Cutlucent is 34%, the standard deviation of returns on the market is 15%, the expected return on the market is 8%, and the risk-free interest rate is 3%.

**Short Answer 2 (15 points)**: Assume you invest $200,000 in Starbucks which has a beta of 0.8 and $600,000 in Hewlett-Packard which has a beta of 1.65. Set up the calculations to determine the beta of your portfolio.

**Problem (75 points)**: Assume the expected return on USDefault (USD) Inc. is 8% and on Japan Airbus Lines (JAL) is 16%. Assume also that the correlation between USD and JAL is 0.2 and that the standard deviation of returns on USD is 10% and on JAL is 23%. Assume also that the return on T-bills is 5%. Assume also that you wish to construct a portfolio with a standard deviation of returns of 22%.
a. Show your optimal portfolio of USD, JAL, and T-bills and show how much better off you are than if there were no risk-free asset.
b. On the same graph, show how your expected return changes if the correlation between USD and JAL falls to -0.3 and the rate on T-bills falls to 1%. Note: Be sure to clearly indicate which part of the graph answers part a) and which answers part b).
c. Because of the changes in part b), will you buy, buy and return, sell, or short-sell additional T-bills? How will the relative weights of JAL and USD change?

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