Quiz B for 9:45 Class: 7/24/13 Name ____________________________

Note: Answer parts a, b, and c on the same graph. Be sure to clearly label which parts of your graph answer which parts of the question.

Assume you have $100,000 and are considering buying and/or short-selling shares of Kellogg (K) and Google (GOOG). The expected return on Kellogg is 6% and the standard deviation of returns on Kellogg is 10%. The expected return on Google is 18% and the standard deviation of returns on Google is 32%. You also plan to buy or short-sell 10-year Treasuries which earn 1% per year. The correlation between Kellogg and Google is - 0.3.

a. Assume you want to build the best possible portfolio with a standard deviation of returns equal to 25%. Sketch a graph of the portfolios you could build if you <u>do not</u> buy or short-sell any Treasuries. Identify your specific portfolio.

b. <u>On the same graph you used to answer part a</u>, sketch a graph of the portfolios you could build if you buy or short sell Kellogg, Google, <u>and</u> Treasuries. Identify your portfolio if you still want a portfolio with a standard deviation of returns equal to 25%. Show how much better or worse off you are compared to your answer in part (a).

c. Assume the risk-free rate of return rises to 5% and that you still want to build a portfolio with a standard deviation of returns equal to 25%. <u>On the same graph you used to answer (a) and (b)</u>, show how much better or worse off you are as a result of the rise in the risk-free rate.

d. How would you construct your portfolio in part (a)…what would be your positions in Kellogg and Google?

e. How would you construct your portfolio in part (b)…what would be your positions in Kellogg, Google, and Treasuries?

f. How would your portfolio weights between Kellogg and Google change as a result of the rise in interest rates in part (c)?