

**Quiz B: 7/24/14**

Name \_\_\_\_\_

Note: Answer parts a, b, and c on the same graph. Be sure you clearly label which part of the graph answers which part of the question.

Assume T-bills earn a return of 2%, that Oneok Partners (OKS) has a standard deviation of returns of 10% and an expected return of 7%, and that Green Mountain Coffee Roasters (GMCR) has a standard deviation of returns of 25% and an expected return of 18%. Assume also that the correlation between OKS and GMCR is -0.4. Finally, assume that you would like to invest in a portfolio with an expected return of 9%.

- a. Sketch a graph of the portfolios you can achieve if you buy or short-sell OKS and GMCR. Identify your preferred portfolio.
- b. Sketch a graph of the portfolios you can achieve if you buy or short-sell OKS, GMCR and T-bills. Identify your preferred portfolio. Show also how much better or worse off you are than in part a.
- c. Assume that the standard deviation of returns on both OKS and GMCR rise by the same amount and that nothing else changes. Sketch a graph of the portfolios you can now achieve and of your preferred portfolio. Show how much better or worse off you are than in part b.
- d. What is the approximate mix of OKS and GMCR in part a?
- e. What is the approximate mix of OKS, GMCR and Treasuries in part b?
- f. How will the mix between OKS and GMCR change in part "c" (compared to part "b")?