

**Quiz A: 7/25/16**

Name \_\_\_\_\_

Assume Kellogg has a standard deviation of returns of 10% and an expected return of 10%. Assume also that Amazon has a standard deviation of returns of 25% and an expected return of 20%. And assume that the correlation between the returns on Kellogg and Amazon equals +0.3.

Note: Answer all of the following questions with a single graph. Just be sure to identify which part of the graph answers which question.

- a. If you can take long or short positions in Kellogg and Amazon, identify a portfolio that allows you to earn an expected return of 18%. Identify the lowest risk portfolio you can build that allows you to earn your desired expected return.
- b. Assume you can also take long or short positions in Treasuries that earn a 3% return. How does the risk of your best portfolio (that allows you to earn 18%) compare to part a? Are you better off or worse off?
- c. Assume the correlation between Kellogg and Amazon falls. How does the risk of your best portfolio (that allows you to earn 18%) compare to part b? Are you better off or worse off?
- d. Assume you have \$100,000 of wealth. What are your approximate holdings of Treasuries and the portfolio of Kellogg and Amazon in parts b and c?