$\qquad$
Note: Answer all of the following on a single graph. Be sure to clearly label which part of the graph answers which question.

Assume you are planning to build portfolios of the two following stocks.

| Asset | Expected Return |  | Standard Deviation |
| :--- | :---: | :---: | :---: |
| Eli Lilly | $12 \%$ |  | $15 \%$ |
| Carnival | $25 \%$ |  | $32 \%$ |

The correlation between the returns on Eli Lilly and Carnival is 0.1 .
a. Sketch a graph that shows the risk and return of all possible portfolios if you limit yourself to holding long positions in these two stocks.
b. Assume you are willing to accept a standard deviation of returns on your portfolio of as high as $45 \%$. Identify on your graph your best possible portfolio.
c. Assume you allow both long and short positions in the two stocks. How would your answer change from part b.
d. Assume that due to an acquisition, the expected return on Carnival rises to $30 \%$ but the standard deviation on of returns remains at 32\%. The correlation between Eli Lilly and Carnival remains the same. How would your answer to c. change? Show on your graph how much better off you are after the change.

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

