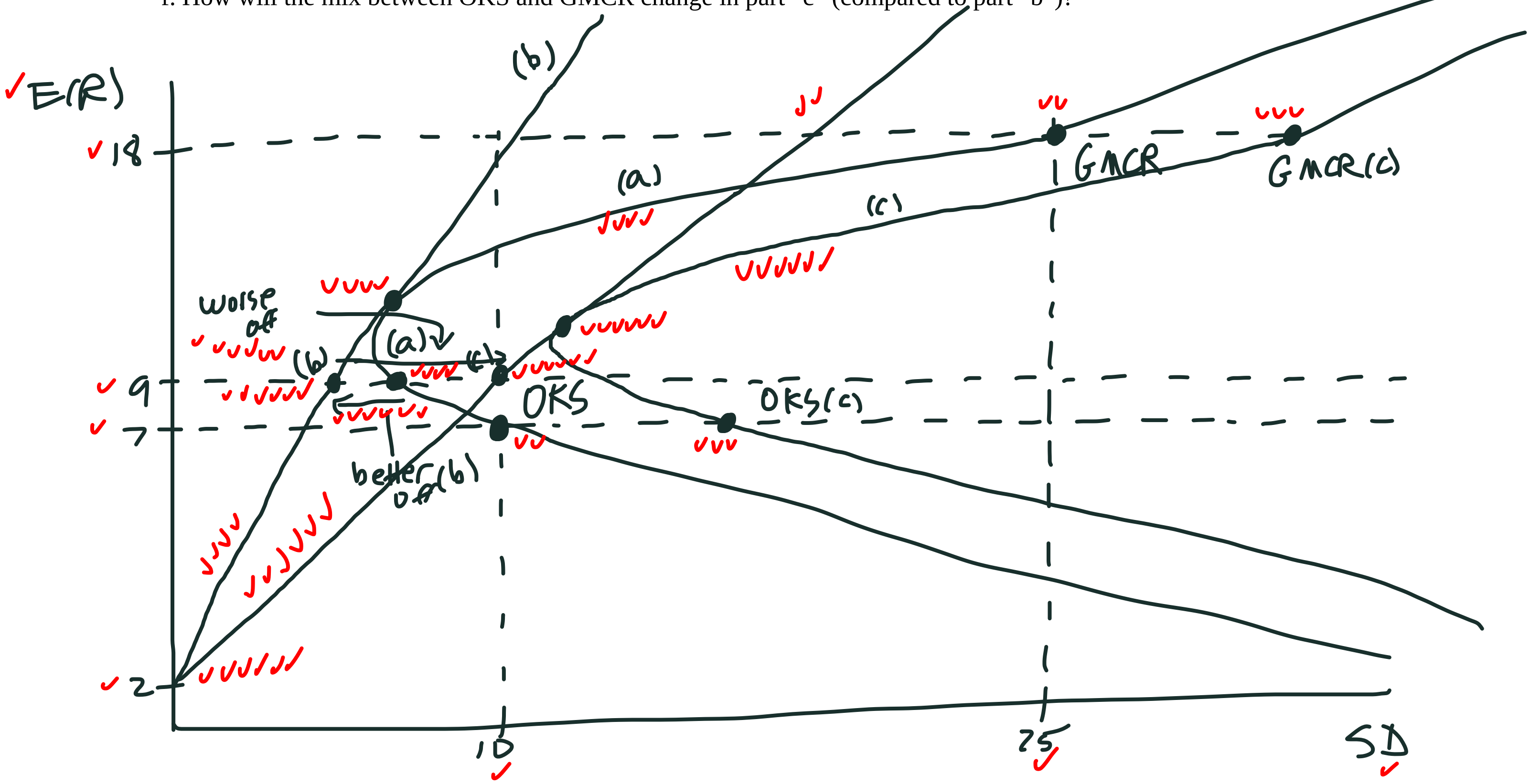
Quiz B: 7/24/14 Name Key

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 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?
98 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")?



d. Approximately 80% OKS + 20% GMCR

e. Approximately 25% Treasuries & 75% Tangent portfolio
⇒ tangent portfolio approximately 50/50 split between OKS & GMCR

f. Slightly higher % in GMCR.

Score = 75 × $\frac{\text{checks}}{98}$