PROBLEMS IN PORTFOLIO ANALYSIS

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After short expository lectures, appropriately timed throughout the week, mathematical and statistical problems will be developed which address the following issues:

1. How does an individual investor select an investment portfolio that achieves her preferences for risk versus reward?
2. How does a fund manager determine with a prescribed degree of confidence the maximum amount of money his fund can lose in the next week?
3. In order to hedge against these risks, how does one correctly price options on these portfolios?

In addition to mathematically modeling the problems, data will be available for calibration and simulation (using Excel, Mathematica or Matlab).