

Place your name on the back of this sheet of paper and nowhere else. Staple your answers face up on the front of this sheet of paper. Failure to follow these directions will cost you 10 points. Your assignment will be typed, except graphs can be drawn by hand and mathematical equations can be done by hand. Failure to type it will cost you 10 points. If you use double-sided printing or print on the back of scrap paper, I will give you one additional point.

1) (10 points) In the article below, Points 3 & 4 show a distinct difference between the first 45 years of the period and the most recent 45 years. One of those points helps to explain the other one. Explain why that is true.

<https://www.nasdaq.com/articles/90-year-history-capital-market-returns-and-risks-2016-02-15>

2) (20 points) Draw the graph of utility vs income for a risk averse person. Suppose a person had on commission had a 75% probability of earning \$800 and 25% probability of earning \$400. Show on your graph the following: the expected payoff, the utility of expected payoff, and how much the person would be willing to work for if they had a guaranteed payment. State how you found each.

3) (15 points) Explain why mutual funds are generally a better way to buy stocks than buying individual stocks.

4) (20 points) Draw the graph of portfolio return vs σ . Draw it such that the person has a portfolio which includes both the riskless assets and stocks. Recently, the return on Treasury Bonds has increased. Illustrate that on the graph. Explain why the curve(s) moved as drawn. What does that do to the portfolio mix of riskless assets and stocks? Explain your logic.

5) (15 points) In Question #4, the indifference curves do not look like the ones we used to draw. Explain why they take that unusual shape.

6) (20 points) Suppose that, like the example in the book on Page 172, a store can buy 200 suits at a price of \$100/suit or you can buy 100 suits at a price of \$125/suit. Unsold suits can be returned for a 50% refund. You will sell suits for \$200/suit. There is a 50% probability you will be able to sell 200 and a 50% probability you can only sell 100. What is your expected payoff if you buy 100 suits? What is your expected payoff if you buy 200 suits? Which do you buy? If you had complete information, what is your expected payoff? How much is the value of the information about how many you can sell? Show all work and briefly explain what you did.