1. On tradesports.com a contract is traded which pays 100 dollars if Bush is elected president in the next presidential election. The cost of the contract is 56 dollars.

Does this tell you something about the expected value of Bush winning? (Argue very carefully.) And about he variance? What is the covariance of Bush winning and Kerry winning? (Does Nader has something to do with your last answer?)

2. Consider an agent living 3 periods, with logarithmic preferences, and with endowments $w_t$ in period $t = 1, 2, 3$. He/she does not discount the future and faces an interest rate $r_1 > 0$ in period 1 and an interest rate $r_2 = 0$ in period 2. What is the effect of a change (e.g., a marginal increase) in the interest rate in period 1 on the agent’s consumption in period 2 and in period 3.

3. Consider an agent with the following preferences:

$$u(c) = \frac{1}{1-\sigma} c^{1-\sigma}, \quad \sigma > 0$$

How does risk aversion depend on $\sigma$? (Define first risk aversion, there are several definitions, make up one that makes sense to you.) Can $\sigma$ be negative?

4. Consider a risk averse agent. He faces a health risk of $D$ (he/she has to go to the hospital and pay $D$, and he/she’ll be fine) with probability $\pi$. He/she can buy insurance at price $q$ (that is he/she can buy at cost $q$ a contract that pays 1 dollar if he/she has to go to the Hospital). How many units of the contract will the agent buy is the price is $q = \pi$?