1. Below is a list of fallacious arguments about crime. Identify the fallacy and justify your answer.

   a) “Gun owners are obviously biased against gun control. Therefore, their arguments on this topic are irrelevant.”
   b) “Criminals do not have morals. So, if you see a person who committed a crime doing something that looks altruistic, it is because this person expects to profit from it.”
   c) “I am not going to take your argument seriously. You wrote ‘larceny’ with an ‘s’.”
   d) “Don’t tell me how the prison system should be conducted. You never spent any time in prison in your whole life!”

2. What moral philosophy do economists usually use? Justify your answer.

3. The policy of one school was to punish students for being late, while the corresponding policy in an otherwise identical school was to reward students for being on time. If effectiveness is measured by behavior on the day following punishment or reward, which policy would seem to be more effective? Is this standard of effectiveness a good one?

4. There is a negative correlation between schooling and the probability that a person will become a criminal. Identify the three main possible causal mechanisms.

5. Studies have shown that in New York City subway crime rates fall in the years following increased police patrols. Does this pattern suggest that the increased patrols are the cause of the crime reductions? Explain.

6. Research on criminals indicates that individuals who serve longer sentences in prison are more likely to recidivate. What can be concluded about the effectiveness of the prison system from such a finding?

7. A witness testifies that the taxicab that struck and injured Smith in a dark alley was green. On investigation, the attorney for Green Taxi Company discovers that the witness identifies the correct color of a taxi in a dark alley 80% of the time. There are two taxi companies in town, Green and Blue. Green operates 15% of all local taxis. The law says that the Green Taxi Company is liable for Smith’s injuries if and only if the probability that it caused them is greater than 0.5. Is Green liable? Explain.

8. What are the limitations of the concept of statistical significance?

9. How is it possible for the optimal amount of crime to be positive?
10. Should we expect the optimal amount of crime to be higher in poor countries or in rich countries? Justify your answer.

11. Should we expect the optimal amount of crime to be higher in countries where education is good or where education is bad? Justify your answer.
11. There is an old English proverb: “As well hang for a sheep as for a lamb.” What are the advantages and disadvantages of policies like this one?

12. In rural areas individuals can set out targets in the back of their homes and shoot at them with a rifle or pistol without violating any criminal statutes. However, they have civil liability for any damage done to the property of others. In cities and suburbs, it is generally a violation of criminal law to discharge a firearm in the back of your home, even if the weapon is pointed straight down into the ground and can do no damage. Is there an economic rationale for the disparity of treatment of firearms between rural and urbanized areas?

13. Explain the trade-off between the deterrent effect and the brutalization effect.

14. There is a distinction between robbery and armed robbery recognized in existing law. If we have already imposed the highest punishment we are willing to use for armed robbery, what are the consequences of increasing the punishment for ordinary robbery?

15. What is the difference between crimes that are substitutes and crimes that are complements? Give one example of each.

16. Explain the trade-off between the certainty of punishment and the severity of punishment.

17. What are the problems with using fines as punishment for different crimes?

18. Overtime parking at meters imposes costs on those seeking to park, perhaps to shop or work. However, metered parking is costly to enforce because, compared to revenue from meters, the cost of meter readers who write tickets is high. This suggests raising the fine for overtime parking from, say, $20 to $200 or even $2,000. What unintended consequences might result from these much higher fines?

19. If the expected payoff of a criminal activity is positive, what type of people will potentially commit this crime? Explain.

20. If the expected payoff of a criminal activity is negative, what type of people will potentially commit this crime? Explain.

21. What is the most effective way of deterring risk averse criminals? Justify your answer and draw a graph that illustrates your argument.
22. What is the most effective way of deterring risk seeking criminals? Justify your answer and draw a graph that illustrates your argument.

23. Use the graphical analysis of risk preferences to answer the following questions:
   
   a) Are rich risk averse criminals more or less sensitive than poor risk averse criminals to increases in the severity of punishment? Explain the intuition of the result.
   
   b) Are rich risk seeking criminals more or less sensitive than poor risk seeking criminals to increases in the severity of punishment? Explain the intuition of the result.
   
   c) If some people feel some level of disutility for committing a crime, some will be deterred by this feeling, but depending on how attractive the criminal activity is, some others will still choose to commit a crime, even if they feel some level of guilt for doing so. What will be the risk attitudes of these individuals? Explain.
   
   d) If wages in the legal labor market increase, some potential criminals will choose not to commit crimes anymore. Who will be more sensitive to changes in legal wages? Risk averse or risk seeking individuals? Explain.

24. Explain the Value Function in Prospect Theory and how it relates to the risk preferences of criminals.

25. Explain the Weighting Function in Prospect Theory and how it relates to the criminal’s sensitivity to changes in the certainty of punishment and the severity of punishment.

26. Explain the trade-off between public measures of safety and private measures of safety.

27. Describe the main results about the use of observable private measures of safety and unobservable ones.

28. Suppose I live in a neighborhood that is concerned about the high level of crime. We have a meeting to discuss crime prevention strategies. Which proposal would you support and why?

29. Discuss the use of security cameras versus increased penalties as a mechanism to deal with increased shoplifting among teenagers.

30. Use the game-theoretic model to explain how these two phenomena are theoretically possible to occur in the real world:

   a) A lot of resources are spent fighting crime, but there is basically no change in the crime rate;
   
   b) Very few resources are spent fighting crime, and there is a large reduction in crime.
31. Mary’s utility from income is given by $U = 10m - 0.001m^2$. On her current job, she earns $2,000 in legal work with certainty. Because Mary is responsible for handling significant amounts of cash, she has the opportunity to embezzle significant sums. Specifically, assume that she could embezzle and additional $2,000 so that her illegal income would be $4,000. However, if she engages in illegal activity, there is a specific probability that she will be caught and sanctioned. Assume that sanction involves the loss of both the amount embezzled and half of her legal earnings so that her income, if she is caught and sanctioned, becomes $1,000.

a) What probability of being sanctioned will deter Mary?

b) Assume that the sanction is increased so that her income if she is caught becomes equal to 0. Under these circumstances, what probability of being sanctioned will deter Mary?

c) Assume now that there is a 10% chance of being sanctioned regardless of illegal activity. Thus the probability of sanction if Mary is legal is 0.1 and the probability if she is illegal rises to $p + 0.1$. Please compare your answers to parts a and b and comment on the effect of conviction of the innocent on the supply of crime.

32. Consider three individuals with the following utility functions:

$$U_1 = \frac{m}{20 + m}$$

$$U_2 = m$$

$$U_3 = \frac{m}{20 - m}$$

Where $m$ is the monetary value of the activity.

Assume that the criminal activity pays $10 if the person is not caught, and $J$ if the person is caught. The probability of getting caught is 50%. Wages in the legal labor market are equal to $2. Given this information, answer the following questions:

a) What is the risk attitude of individuals 1, 2, and 3? Explain.

b) Calculate the value of $J$ that is necessary to deter each individual. Explain the intuition.

c) Now assume that $J$ is equal to -$8, and the probability that the individual is caught committing the crime is $p$. Calculate the value of $p$ that is necessary to deter each individual. Explain the intuition.

d) Now assume that each individual already starts with an initial income of $8. Calculate the critical values of $J$ from part b and the critical values of $p$ from part c. Explain your results.