

Part I: Answer one of the following questions. Each is worth 10 points.

1. Should society take as its objective the eradication of all crime? Of all pollution? Of all accidents? On what basis should society allocate its scarce resources toward reduction of crime, pollution, accidents, and other bad things?
2. The ABC company has developed a problem with vandals, who throw bricks through its windows at random times. The XYZ company has developed a problem with pilferage: Of everything it produces, about 10% is stolen. *True or False:* Although the vandalism problem will not affect prices at ABC, the pilferage problem might cause XYZ's prices to rise. Explain your answer.

Part II: Answer one of the following questions. Each is worth 10 points.

3. *Fact 1:* California currently has a "three strikes and you're out" law which raises the penalty for criminals convicted of a third felony offense to a mandatory prison sentence of 25 years-to-life.
Fact 2: An article in the Los Angeles Times reported that some law-enforcement officials have blamed the law for an increase in the level of violence committed by third-time offenders. Reconcile Fact 1 and Fact 2.
4. *Fact 1:* Auto safety regulations have increased considerably since the 1960s.
Fact 2: Over the same period of time, studies indicate that the rate of driver fatalities has not changed much, and the rate of pedestrian fatalities has **increased**. Reconcile Fact 1 and Fact 2.

Part III: You must answer each question in this part. Each is worth 15 points.

5. Consider a lottery with three possible outcomes: \$200 will be received with probability .3, \$100 with probability .2, and \$60 with probability .5.
 - a) What is the expected value of the lottery?
 - b) What would a risk-neutral person pay to play the lottery? If so, what is the maximum price she would be willing to pay?
 - c) Would a risk-averse person ever be willing to play this lottery? Why or why not?
6. Consider the bargaining game describe by the payoff matrix below. The players strategies are either to Fullfill the terms of a contract or Breach the contract . Player A's payoffs are listed first.

		Player B	
		Fullfill the Contract	Breach the Contract
Player A	Fullfill the Contract	50, 50	20, 60
	Breach the Contract	0, 20	0, 60

- a) Do any of the players have a dominant strategy? If so, what is it?
- b) What outcome do you predict will occur if both parties pursue their own self-interest? Is the outcome a Nash equilibrium? Explain.
- c) Is the outcome chosen above pareto optimal? Why or why not?