Name_____

1.) Suppose we have a small inhabited island with three residents and a volcano that generates air pollution. Two people live upwind of the volcano and one person lives downwind. For $21,000 we can clean up the volcano with a patented "smoke guzzler." The two upwind people would pay $1,000 each to get rid of the smoke whereas the downwind person would be willing to pay $15,000. Consider two plans to finance the "smoke guzzler." Plan A calls for a tax of $7,000 per person. Plan B calls for the affected part (the downwind person) to pay $21,000 and everyone else nothing. Compare each plan to the status quo and indicate society's choice using (a) the Pareto criterion; (b) majority rule; (c) the compensation principle.

2.) Suppose that the current market equilibrium for a good is such at p* = $70 and q* = 20. Also suppose that the elasticity of supply is 1.5 and the supply curve is linear.

      a.) Use the price elasticity of supply and market equilibrium to solve for the supply curve.

      b.) Suppose a policy is enacted such that the price falls from $70 to $50. By how much does producer surplus fall? Show this graphically and calculate the Δps.

3.) Give two reasons why conceptually correct measures of benefits might differ from the measures actually used in Cost-Benefit Analysis? (Hint: Consider that the true marginal value for a good is reflected by the competitive market price.)

4.) Suppose we have an efficiently operating market for video game consoles. Recent research has shown that video game players are much more likely to become out of shape. In an effort to promote fitness, the government has decided to impose a per unit tax on consumers in this market.

      Graphically illustrate the following (make sure to LABEL your graph!!!!):
            a.) Change in consumer surplus due to the tax
            b.) Change in producer surplus due to the tax
            c.) Change in government surplus due to the tax (hint: you can think of this as the change in government revenue)
            d.) Total welfare change

5.) Consider a market with asymmetric information. More specifically, suppose consumers **overestimate** the risks associated with consumption of a particular good. Illustrate this situation graphically and show the dead weight loss in this market.

6.) Suppose the output of jumbo shrimp from a shrimp bed is given by the following production function, where L represents the labor input and TP represents total product, or output, in shrimp.

Labor	TP
1	4
2	12
3	19
4	25
5	29
6	31
7	32
8 or more	32

Assume the market price for shrimp is $10 each and all shrimp gatherers can earn $40 per day in their next best alternative.

    a.) Suppose the shrimp bed is "common property", no one owns it and anyone who wishes can work the shrimp bed and share equally in the output. That is, the value of the total product is split evenly amongst however many workers decide to work the shrimp bed. How many workers will harvest shrimp in this case? Explain why common property is inefficient.

    b.) Suppose the shrimp bed is privately held by a profit maximizing owner. How many workers would the owner hire, and would it be an efficient allocation of resources?

7.) Recall our example from class where a nearby lake is stocked with fish effectively lowering the cost of fishing access for city residents.

Now, consider that golf serves as a substitute activity for fishing and that the supply schedule is upward sloping in this secondary market.

    a.) Show graphically what happens to the demand for golfing days.

    b.) In your graph above, illustrate the net change in social surplus. Are golfers made worse off by the stocking of the lake? Why or why not?