

Show your work for partial credit. Graphs are helpful. Be sure to read and answer the question thoroughly.
Have fun!

1. Use the following equations to answer the following questions:

$$\text{The Supply of Slinkys is: } P = 5Q + 10$$

$$\text{The Demand for Slinkys is: } Q = 110 - \frac{1}{2}P$$

- a. What is the equilibrium price of Slinkys?
 - b. What is the equilibrium quantity of Slinkys demanded and supplied?
 - c. What is the producer surplus (profit)?
 - d. What is the consumer surplus?
 - e. The government decides Slinkys are hazardous to your health (because people trip over them when walking down steps). The government imposes a \$1 per unit tax on Slinky producers. What is producer surplus now? (Assume you can buy portions of a Slinky.)
 - f. What is the consumer surplus after the tax?
 - g. What is the value of the tax revenue?
 - h. How much of the tax revenue do consumers bare?
2. Suppose sugar and corn sweetener, made by kernels of corn, are substitutes. Hailstorms in the Midwest United States destroy half of the corn crop and raise the price of corn.
- a. What will be the impact on the equilibrium price and quantity of sugar?
 - b. What will happen to sugar producer surplus?
 - c. In response to the changes in the sugar market, the United States government decides to place a binding price ceiling on sugar. What will happen to corn producers' (those not affected by hail storms) surplus?
3. Assume that there are only two goods, and they happen to be Coca-Cola and Pepsi.
- a. If Coke and Pepsi are the same price, draw the typical budget constraint. Be sure to label the intercepts and axes. Put Pepsi on the horizontal axis.
 - b. If Coke goes on sale for 20% less than its regular price, draw the new budget constraint.
 - c. Now suppose instead that Pepsi goes on sale for 40% less than its regular price, draw this case.
4. True, False, or Uncertain and explain (most of your points come from your explanation). Suppose that there are only two goods that an individual cares about, Auburn football and Auburn basketball. If the price of a football game is 2.5 times the price of a basketball game, then he or she will attend only 40% as many football games as basketball games.
5. Suppose a Pizza Hut Large Pepperoni Pizza is \$15.
- a. Show your budget constraint for Pizza Hut Large Pepperoni Pizzas. (Hint place all other goods on the y-axis)
 - b. Pizza Hut decides to offer the following sale: Get up to 5 large pizzas of equal value for only \$5 each when ordering one large at full menu price. Show your new budget constraint for Pizza Hut Large Pepperoni Pizzas.
 - c. Why might this change the number of pizzas the consumer purchases?
6. Sasha and Rey can either eat salmon or shrimp. Using indifference curves demonstrate that Sasha has a stronger preference for salmon than Rey.
7. You currently drive your car everywhere because gasoline is only \$1.75/gallon. The state of Alabama decides to raise the tax on gasoline, so that the after tax price will now be \$2.50/gallon. Using utility curves and budget constraints, show the following:
- a. The total effect on gasoline consumption
 - b. The substitution effect (the reduction in gasoline consumption due solely to the fact that gasoline is more expensive)
 - c. The income effect (the reduction in the gasoline consumption due solely to the loss of purchasing power implicit in the price increase of gasoline)