

1. Maxine like both jam and jelly. However given current prices of jam and jelly and her income, Maxine buys only jam. Show that if the price of jam remains constant but (A) her income increases or (B) the price of jelly falls, she may (but will not necessarily) buy some jelly.
2. Assume that, if a family is eligible for food stamps, it pays \$100 per month to obtain \$150 worth of food.
  - (A) Compare the family's budget constraint with and without food stamps.
  - (B) Use an indifference curve-budget line analysis to show that the family may not buy the food stamps under certain circumstances.
  - (C) Discuss the circumstances where the family will be better off with \$50 cash than this food stamp program.
3. Marginal rates of substitution and optimal bundles:
  - (A) A consumer's utility function is  $U(B, Z) = AB^\alpha Z^\beta$ , where  $A$ ,  $\alpha$ , and  $\beta$  are constants,  $B$  is burritos, and  $Z$  is pizzas. What is the consumer's marginal rate of substitution between burritos and pizza?
  - (B) Christina likes only spare ribs,  $R$ , and fried chicken,  $C$ . Her utility function is
$$U = 10RC^2.$$
What is her marginal utility of spare ribs function? She pays \$5 for a slab of ribs and \$10 for a chicken. What is her optimal consumption bundle? Show her optimal bundle in an indifference curve-budget constraint diagram.
4. Bill is always willing to trade three donuts for one apple pie (regardless of how many of each he has). Derive his demand curve for donuts.
5. Illustrate that the Paasche cost-of-living index underestimates the rate of inflation when compared to the true cost-of-living index. A Paasche index weights prices using the current quantities of goods purchased. In contrast, the CPI (which is also called a Laspeyres index) uses quantities from the earlier, base period.
6. What are the views of President Bush and Senator Kerry (or any other Democratic presidential candidate of your choice) on income taxation (and tax cuts in particular)? Do they advocate changing the marginal income tax rates in the future or providing a lump-sum "rebates" now (as President Bush employed at the beginning of his term)? Formally analyze the difference between lowering the marginal rate and giving tax payers a lump-sum payment (set so that these two "tax cuts" are equal for the coming year) on their labor-leisure choice.
7. *Review* (Chapter 3): The government applies a binding price ceiling on skate boards. (A) Show and discuss the effects of applying the ceiling. Now, the government also collects a specific tax of  $t$  per skateboard from consumers. (B) Again show and discuss the effects of the combination of the ceiling and the tax.