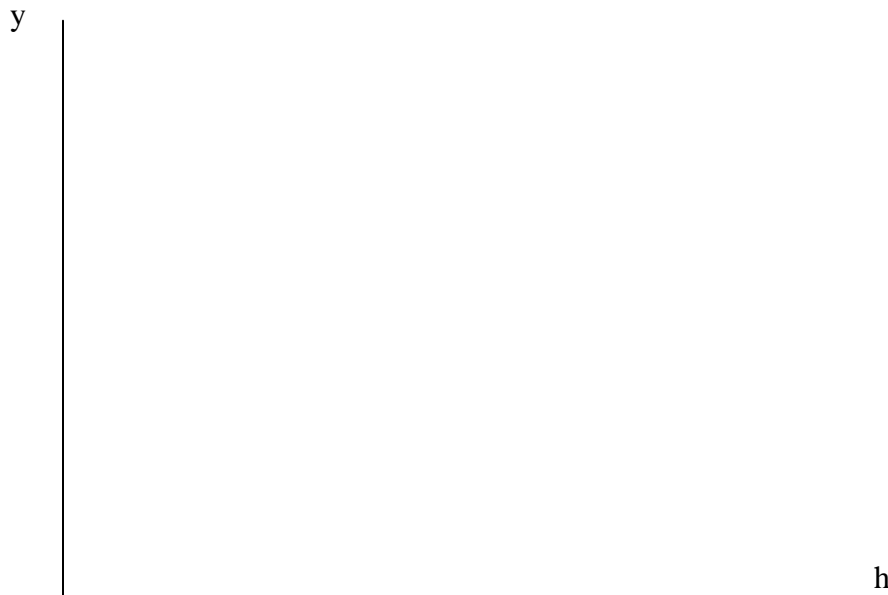


Test #1 – Econ 6401
Fall 2006 – Dr Rupp
10 Questions worth 10 points each (unless otherwise indicated)

Name _____

Sign Pledge _____
“I have neither given nor received aid on this exam”

1. Billie Joe consumes housing (denoted as h) and other goods (composite good labeled y) both goods Billie Joe likes. Initially Billy Joe earns income of \$100, the price of housing is \$10 and the composite good price is \$1. At these initial prices, Billie Joe consumes 2 units of housing. A few months later Billy Joe gets a raise at work, now earning \$120, unfortunately the price of housing has risen to \$15, while the composite good price remains unchanged. His new basket now includes 1 unit of housing. Using revealed preference analysis show on a graph below (don't draw any indifference curves) what we can say about how he ranks the initial basket and the new basket?



2. Are the following choices consistent or inconsistent with a consumer maximizing utility? Why or why not?

- At $P_x = \$4$ and $P_y = \$2$, the consumer chooses basket A: $X = 5$ & $Y = 2$
- At $P_x = \$3$ and $P_y = \$3$, the consumer chooses basket B: $X = 2$ & $Y = 6$

3. The estimated price elasticity of demand for cigarettes is -0.45 . Explain in words what this means. If the price of cigarettes rises by 20% due to a new cigarette tax, what effect will this have on cigarette consumption? How will expenditures on cigarettes be affected?

4. Jenna has a current income of \$200 per month. She buys two types of goods: food and non-food items. The price of a food item is \$4 and the price of a non-food item is \$2.
 - A. Graph her budget constraint below, label it “Old Budget”
 - B. Assuming that her indifference curves have the typical shapes, find her optimal bundle and label it “Old Optimal”

Non-food

Food

- C. On the graph above show the new budget constraint if Jenna receives \$100 in food stamps, label this curve “New Budget”
- D. Find her new optimal bundle and label it “New Optimal”

5. Jane likes DVDs twice as much as she likes VHS tapes.

A. On a graph below draw **three** indifference curves for Jane where I_3 is preferred to I_2 which is preferred to I_1

B. Jane earns \$60 per week. If DVDs cost \$12 and VHS tapes cost \$5, how many DVDs and VHS tapes will she buy?

6. Madison likes shoes. But Madison only likes to buy only matching-pairs of shoes (left and right shoes). On a graph below put left shoes on the vertical axis and right shoes on the horizontal axis and draw **three** indifference curves for Madison where I_3 is preferred to I_2 which is preferred to I_1 .

Left Shoes

Right Shoes

7. My daughter Courtney likes apples and neither likes nor dislikes oranges (oranges are a neuter good for her). Graph **three** indifference curves for Courtney with apples on the vertical axis and oranges on the horizontal axis. Label your indifference curves where I_3 is preferred to I_2 which is preferred to I_1

Apples

Oranges

8. Joe budgets \$18 per week to spend on his morning coffee with milk. He likes it only if it is prepared with 4 parts coffee and 1 part milk. Coffee costs \$1 per ounce and milk costs \$0.50 per ounce. How many ounces of coffee and milk will Joe buy?

9. (5 points each) An individual has a utility function: $U = X^{.5}Y^{.25}$.

A. Does the consumer's preferences exhibit diminishing marginal utility of Y? (show work)

B. Does this utility function exhibit increasing, decreasing, or constant marginal rate of substitution with respect to X? (Show your work)

C. Find the optimal bundle if $P_x = \$1$, $P_y = \$1$, and $M = \$200$.

10. (5 points) Given demand curve, $Q = 100 - 5P$, what is the price elasticity of demand at $P = \$5$?