

Assignment 2 (Due date: Feb 2nd)

- 1) Find the optimum bundle of goods if the utility function is as follow:

$$U(x, y) = x^a y$$

and $P_x = 1$ and $P_y = p$ and income is equal to 10.

- 2) Find the optimum bundle of goods if the utility function is as follow:

$$U(x, y) = \ln(x) + y$$

and $P_x = 2$ and $P_y = 1$ and income is equal to 10.

- 3) Imelda spends her entire income on shoes and hats. Draw the budget line for each of the following situations, identifying the intercepts and the slope in each case.
- Monthly income is \$1,000, the price of a pair of shoes is \$8, and the price of a hat is \$10.
 - Same conditions as in part a, except that income is \$500.
 - Same conditions as in part a, except that income is \$2,000 and the price of a pair of shoes is \$16.
 - Same conditions as in part a, except that hats cost \$5 each.
- 4) Draw a set of indifference curves relating two “bads” such as smog and garbage. What characteristics do these curves have?
- 5) Elton says, “To me, Coke and Pepsi are both the same.” Draw several of Elton’s indifference curves relating Coke and Pepsi.
- 6) With the per-unit prices of broccoli (B) and pork rinds(R) equal to \$2 and \$1, a consumer, George, with an income of \$1,000 purchases 400R and 300B. At that point, the consumer’s $MRS_{BR} = 2R/1B$. Does this mean that George would be just as well off consuming 200R and 400B? Explain with a diagram.
- 7) Measure the income of Samantha on the vertical axis and the income of Oscar on the horizontal axis. Draw several of Sam’s indifference curves under the following circumstances.
- Sam doesn’t care about Oscar’s income, but the higher her own income is, the better off she is.
 - Sam considers both her own income and Oscar’s income to be economic “goods,” but only as long as her income exceeds Oscar’s. When Oscar’s income exceeds hers, Sam considers Oscar’s income to be an economic “bad.”
- 8) If Sam’s preferences relating her own income and Oscar’s income conform to the Golden Rule (“Love thy neighbor as thyself”), what would her indifference curves look like?