

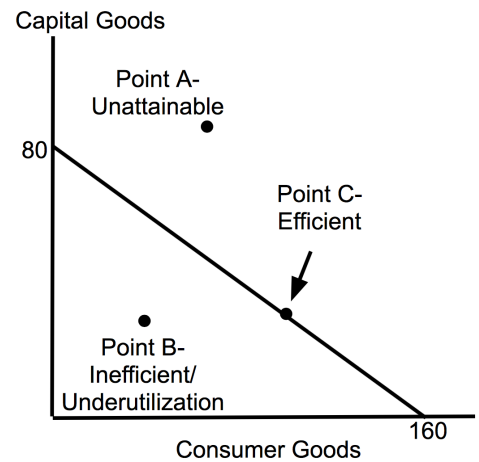


# Microeconomics Unit 1

## Free Response Questions

**FRQ #1 Answers-** See video in [Ultimate Review Packet](#) for detailed explanations.

- (a) Draw a correctly labeled production possibilities curve for Brazil. Place consumer goods on the horizontal axis and capital goods on the vertical axis. Plot the relevant numerical values from the chart on the graph.  
See graph below
- (b) On your graph in part (a), indicate the following.
- A point that represents an unattainable level of production, labeled A  
See graph above
  - A point that represents an inefficient level of production, labeled B  
See graph above
  - A point that represents an efficient level of production, labeled C  
See graph above



- (c) Assume that Brazil moves from producing 80 units of consumer goods and 40 units of capital goods to producing 40 units of consumer goods and 60 units of capital goods. What will happen to economic growth in Brazil in the future? Explain. **Brazil will have more economic growth in the future because it will be producing more capital goods (60 units instead of 40 units). Capital goods, like tools and factories, are resources and can be used to produce even more output in the future.**
- (d) Which country has the comparative advantage in the production of consumer goods? Explain. **Mexico has a comparative advantage in the production of consumer goods because they have a lower opportunity cost for producing consumer goods than Brazil. For Mexico, the opportunity cost for consumer goods is 1/4 capital goods which is less than the opportunity cost for Brazil.**
- (e) Identify a specific number of units of consumer goods that could be traded for 10 units of capital goods and be mutually beneficial for both countries. **Multiple correct answers. Example: 30 units of consumer goods.**
- (f) **Correct answers include any number between (but not including) 20 and 40 units of consumer goods.**

**FRQ #2-** See video in [Ultimate Review Packet](#) for detailed explanations.

Cans of Soda	Total Benefit of Soda (in utils)
1	12
2	22
3	30
4	36
5	40
6	42

Slices of Pizza	Total Benefit of Pizza (in utils)
1	28
2	52
3	72
4	88
5	100
6	108

- (a) What is Jeffrey's marginal benefit from the 4th slice of pizza? Show your work. **16 utils. Marginal benefit is the change in the total benefit divided by the change in the number of units (88-72)/(4-3).**
- (b) What is Jeffrey's total benefit from consuming 2 cans of soda and 1 slice of pizza? Show your work. **The total benefit is 50 utils. Jeffrey gets a total of 22 from the soda and 28 from the pizza.**
- (c) Complete each of the following assuming that Jeffrey spends his entire budget of \$8 on soda and pizza.
- Use marginal analysis to explain why Jeffrey does not maximize his benefit when he consumes 4 slices of pizza. **The marginal benefit per dollar of the 1st and 2nd cans of soda are greater than the 4th slice of pizza. Per dollar spent, Jeffrey could have got more marginal benefit from buying more sodas and fewer pizzas.**
  - What are the optimal quantities of cans of soda and slices of pizza for Jeffrey? **2 sodas and 3 slices of pizza.**
  - At the optimal quantity identified in part (c)(ii), is the marginal benefit of the last can of soda consumed greater than, less than, or equal to the marginal benefit of the last slice of pizza consumed? **The marginal benefit of the last soda consumed is less than the marginal benefit of the last pizza. The 2nd can of soda generates 10 utils of additional benefit and the 3rd slice of pizza generates 20 utils of additional benefit.**
- (d) Assume instead that the price of a slice of pizza is \$4 and that Jeffrey has a budget of \$12. What are the optimal quantities of cans of soda and slices of pizza if Jeffrey spends his entire budget? **4 sodas and 2 slices of pizza.**