ECON 101 TA Session Worksheet

Module 1 & 2

Name: _____

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Instructions: Work through these problems as a group. Show your work and reasoning for all calculations.

Part 1: Marginal Benefit Review

1. **Donuts cost $0.60. The first donut gives you $2 worth of benefit. Each following donut gives you half as much benefit as the previous one. How many donuts should you buy?**

Donut 1 MB = 2 MC = P = 0.6 $2 > 0.6 \Rightarrow$ buy

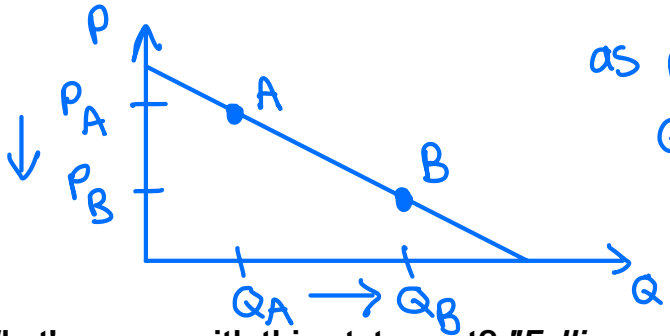
Donut 2 MB = $\frac{1}{2} \cdot 2 = 1$ MC = P = 0.6 $1 > 0.6 \Rightarrow$ buy

Donut 3 MB = $\frac{1}{2} \cdot 1 = \frac{1}{2}$ MC = P = 0.6 $\frac{1}{2} < 0.6 \Rightarrow$ don't buy

2 DONUTS

Part 2: Understanding Demand

2. **Draw a demand curve (label everything). Then, show me (with a picture of a demand curve) how consumers react when price falls. Label the starting point A and the end point B.**



as price falls, QD increases

3. **What's wrong with this statement? *"Falling prices have increased demand for electric cars."***

~~QUANTITY DEMANDED~~

Part 3: Utility Maximization

4. **Suppose you have $10 to spend. Slices of pizza cost $2 each. Cans of Coke cost $1 each. Given the following utility data, how much of each will you buy to maximize your utility?**

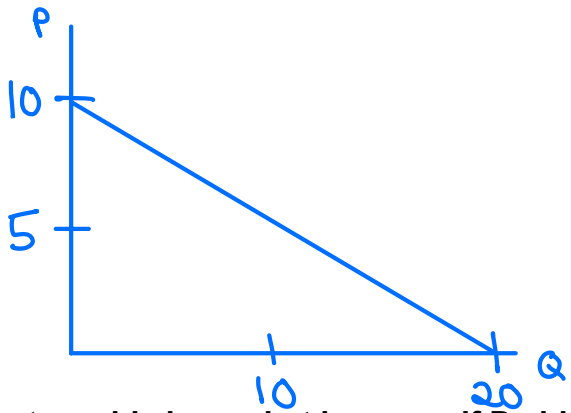
Slices of Pizza	TU	MU	MU/P	Cans of Coke	TU	MU	MU/P
1	20	20	10	1	20	20	20
2	36	16	8	2	35	15	15
3	46	10	5	3	45	10	10
4	52	6	3	4	50	5	5
5	54	2	1	5	53	3	3
6	51	-3	-3/2	6	52	-1	-1

Answer:

Part 4: Graphing Demand

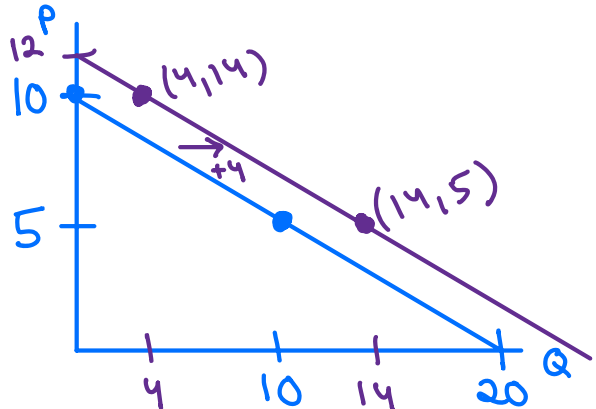
5. **Graph this demand curve (solve for P first to get inverse demand): Q = 20 - 2P**

$Q = 20 - 2P$
$+2P \quad +2P$
$Q + 2P = 20$
$-Q \quad -Q$
$\frac{2P}{2} = \frac{20 - Q}{2}$
$P = 10 - \frac{1}{2}Q$



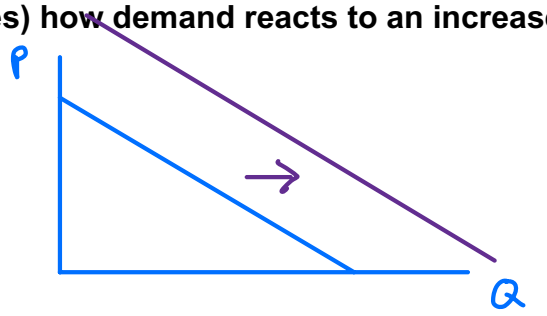
6. **Then graph the curve that would show what happens if D shifts out by 4. What's the equation for that new curve?**

$Q = 20 - 2P$
$Q = 20 - 2P + 4$
$2P = 24 - Q$
$P = 12 - \frac{1}{2}Q$



Extra Problems (If Time Allows)

7. **Show (with pictures) how demand reacts to an increase in the price of a substitute good.**



8. **Winter is here. How does that affect the demand side of the market for ice cream? Answer in words and pictures.**