ECON 103 Name Sam

Chapter 10 Assignment

1. The relationship between an individual's consumption bundle and his/her utility is called
   A) a demand function.
   B) a production function.
   C) a consumption function.
   D) a utility function.

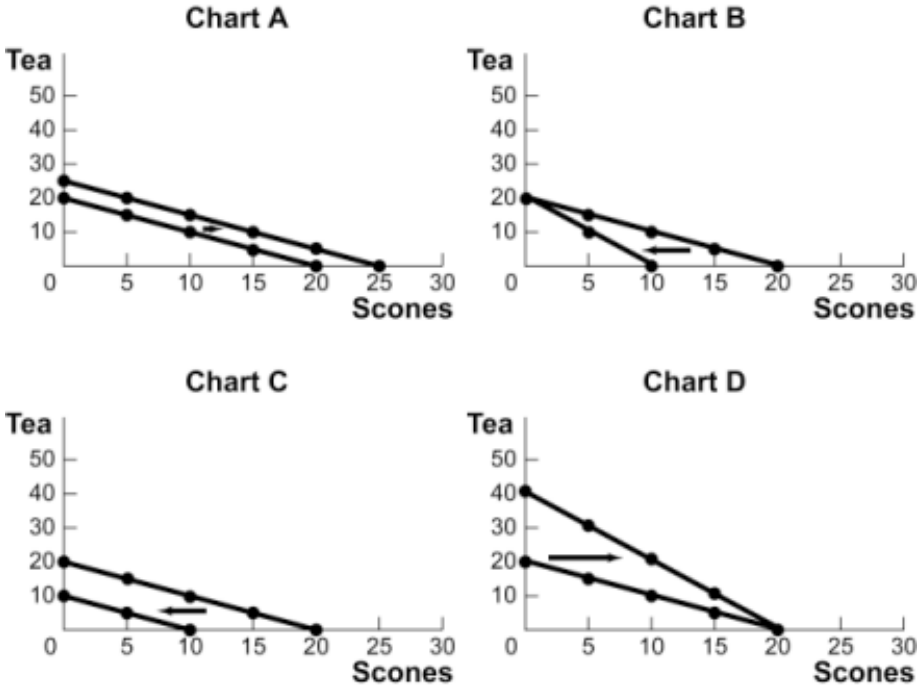
2. Xavier notices that the marginal utility of working with a tutor seems to fall with each hour the tutor helps him study. If Xavier keeps the tutor until his grade actually begins to fall, his marginal utility will be:
   A) negative.
   B) positive, but rising more slowly.
   C) zero.
   D) immeasurable.

3. Chuck spends all his income on two goods: tacos and milkshakes. His income is $100, the price of tacos is $10, and the price of milkshakes is $2. Put tacos on the horizontal axis and put milkshakes on the vertical axis. The slope of Chuck's budget line is equal to:
   A) –1/5.
   B) –5.
   C) 1/5.
   D) 5.

4. James finds a new job that doubles his income. He adjusts his consumption. From this we know that for every normal good James buys:
   A) James's marginal utility per dollar will rise.
   B) James's marginal utility per dollar will fall.
   C) James's marginal utility per dollar will stay constant.
   D) Jame's total utility will fall.

5. Jane spends all her income on goods *X* and *Y* and is purchasing the optimal consumption bundle. If the $MU_X/MU_Y = 3$ and the price of *X* is equal to $12, then the price of *Y* is equal to:
   A) $36.
   B) $4.
   C) $12.
   D) $3.

Figure: The Budget Line



6. (Figure: The Budget Line) For months now, Agnes has had $20 per month to spend on tea and scones. The price of a cup of tea has been $1 and the price of a scone has also been $1. Which of the charts in the accompanying figure shows what will happen to her budget line if her income decreases to $10?
   A) Chart A
   B) Chart B
   C) Chart C
   D) Chart D

7. (Figure: The Budget Line) For months now, Agnes has had $20 per month to spend on tea and scones. The price of a cup of tea has been $1, and the price of a scone has also been $1. Which of the charts in the accompanying figure shows what will happen to her budget line if the price of a scone rises to $2?
   A) Chart A
   B) Chart B
   C) Chart C
   D) Chart D

8. Brad spends all his income on two goods: beer and pizza. He is purchasing the optimal consumption bundle, bundle *E*, that maximizes his utility, given his budget constraint. At the optimal consumption bundle, which of the following statements is INCORRECT?
   A) If the price of beer is greater than the price of pizza, then the marginal utility of beer is greater than the marginal utility of pizza.
   B) If the price of beer is greater than the price of pizza, then the marginal utility of beer is less than the marginal utility of pizza.
   C) If the price of beer is equal to the price of pizza, then the marginal utility of beer is equal to the marginal utility of pizza.
   D) All of the above are incorrect.

9. To say that you can't have too much of a good thing means that for any good that you enjoy (say, pizza), higher consumption will always lead to greater utility.
   A) True
   B) False

10. Mary, an avid gardener, plans to spend 8 hours working in her garden. It takes her 45 minutes to prune a bush, and 30 minutes to fertilize a tree. If she prunes 8 bushes, she will still have enough time to fertilize 6 trees.
   A) True
   B) False

11. If the price of good *X* is $2, the price of good *Y* is $6, and the marginal utility of good *X* is 12, then the marginal utility of good *Y* for a consumer purchasing the optimal consumption bundle of *X* and *Y* is 36.
   A) True
   B) False

12. Bobby spends all his income on two goods: beer and pizza. He is purchasing the optimal consumption bundle that maximizes his utility given his budget constraint. At the optimal consumption bundle if the price of beer is equal to the price of pizza, then the marginal utility of beer is equal to the marginal utility of pizza.
   A) True
   B) False

13. The optimal consumption rule implies that if a consumer is maximizing his utility by spending all his income on two goods, *X* and *Y*, with prices equal to P_X and P_Y respectively, then it must be that $MU_X/MU_Y = P_X/P_Y$.
   A) True
   B) False

14. Complete the following sentence: Consumers maximize utility subject to income and market prices. Explain what the sentence means.

Consumers try to make themselves as well as off as possible given the choices they can afford. The choices are limited by income and how much G+S cost.

15. What is the opportunity cost when a consumer buys a good?

The other G+S the consumer could have bought istead.

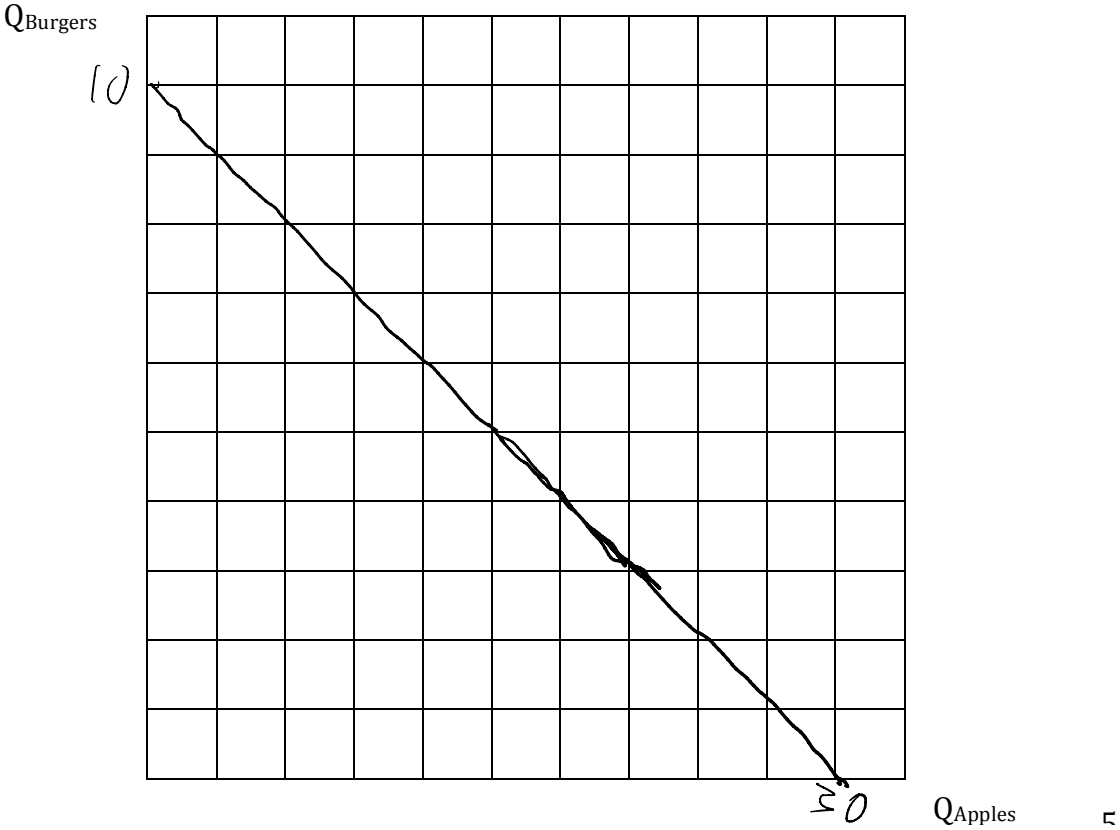
16. What does the slope of the budget line measure?

The opportunity cost of the good on the horizontal axis

The inverse of the slope measures the opportunity cost of the good on the vertical axis

17. Suppose Sam only buys two goods: burgers and apples. Sam's budget is $60 per week; the price per burger is $6 and the price per apple is $2. Calculate and graph all of Sam's possible *consumption bundles*.

Bundle	$Q_{Burgers}$	Q_{Apples}
A	0	30
B	1	27
C	2	24
D	3	21
E	4	18
F	5	15
G	6	12
H	7	9
I	8	6
J	9	3
K	10	0

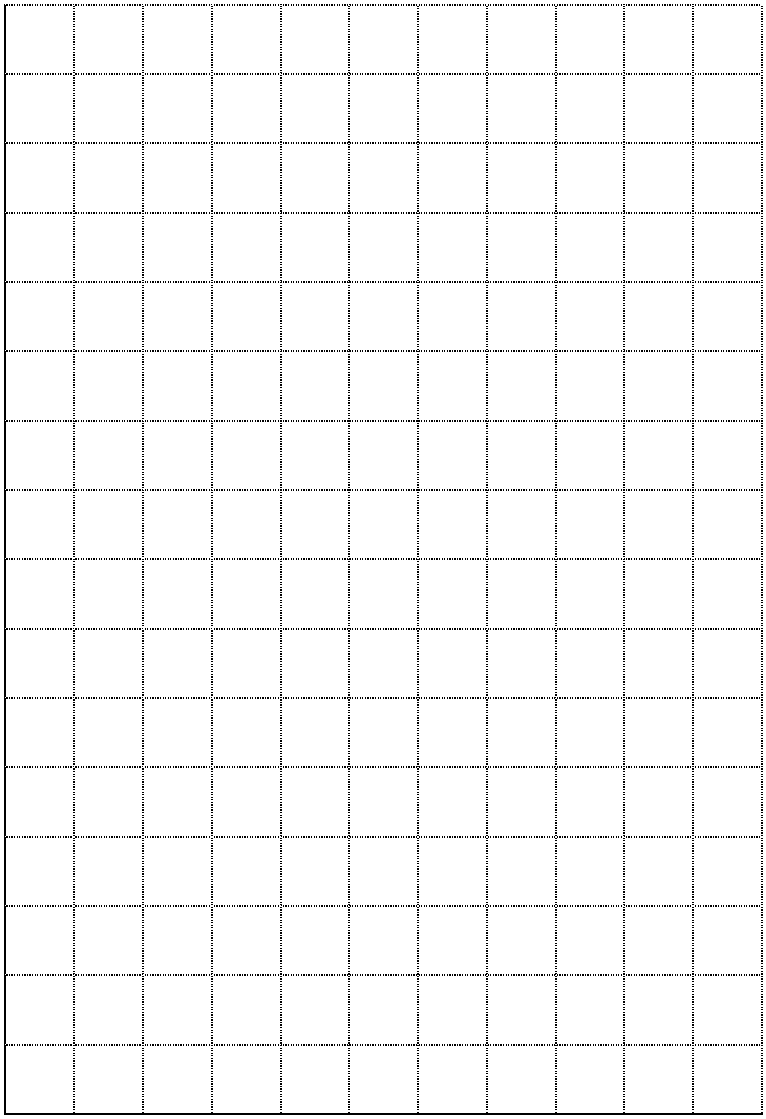


18. The following table provides Sam's total utility for different quantities of burgers and apples. Fill in the table below with Sam's total utility, marginal utility, and marginal utility per dollar spent.

$Q_{Burgers}$	0	1	2	3	4	5	6	7	8	9	10
$TU_{Burgers}$	0	19.2	34.2	45.6	54	60	64.2	67.2	69.6	71.1	71.7
Q_{Apples}	30	27	24	21	18	15	12	9	6	3	0
TU_{Apples}	20.1	20.1	19.5	18.6	17.4	15.9	14.1	11.7	8.7	4.8	0

Bundle	Qburgers	MUBurgers	MU/$ Burgers	Qapples	MUApples	MU/$ Apples	Total Utility from Burgers and Apples
A	0			30			20.1
		19.2	$\frac{19.2}{6}=3.2$		0	0	
B	1			27			39.3
		15	2.5		0.2	0.1	
C	2			24			53.7
		11.4	1.9		0.3	0.15	
D	3			21			64.2
		8.4	1.4		0.4	0.2	
E	4			18			71.4
		6	1		0.5	0.25	
F	5			15			75.9
		4.2	0.7		0.6	0.3	
G	6			12			78.3
		3	0.5		0.8	0.4	
H	7			9			78.9
		2.4	0.4		2	0.5	
I	8			6			78.3
		1.5	0.25		1.3	0.65	
J	9			3			75.9
		0.6	0.1		1.6	0.8	
K	10			0			71.7

19. Graph Sam's marginal utility per dollar spent and determine his optimal bundle of burgers and apples.



Optimal bundle = 7 burgers and 9 apples

20. What is the *optimal consumption rule*?

21. What will happen to the relationship between marginal utility per dollar spent for burgers and marginal utility per dollar spent for apples if the price of burgers decreases? What will Sam do as a result?

22. Suppose Sam hears that apples are very healthy and that eating more apples could help him to live a longer life. What will happen to the relationship between marginal utility per dollar spent for burgers and marginal utility per dollar spent for apples? What will Sam do as a result?