University of Lethbridge – Department of Economics
ECON 1010 – Introduction to Microeconomics
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Lab #7

Chapter 7 — Utility and Demand

1) Which factor(s) constrain a household's consumption choices?
   A) the household's income
   B) the household's preferences
   C) the prices of the goods and services
   D) the household's wealth
   E) the household's income and the prices of the goods and services it buys

   Answer: E

2) A relative price
   A) is the price of one good divided by the total utility of another good.
   B) is the ratio of two marginal utilities per dollar.
   C) is the price of one good divided by the price of another good.
   D) is the total utility per dollar of one good divided by the total utility per dollar of another good.
   E) is the price of one good divided by the quantity demanded of another good.

   Answer: C

3) When the price of good X (placed on the horizontal axis) increases, holding the household's income and the price of good Y (placed on the vertical axis) fixed,
   A) the budget line shifts to right.
   B) the budget line rotates counter clockwise.
   C) the budget line shifts to left.
   D) the budget line rotates clockwise.
   E) the budget line remains unchanged.

   Answer: D

4) A household's real income is described as
   A) the monthly income earned by a household.
   B) the product of quantity of one good by its price.
   C) the ratio of the price of good X to the price of good Y.
   D) the ratio of price index to nominal income.
   E) the quantity of goods that the household can afford to buy.

   Answer: E

5) Holding the prices of good X and good Y constant, when income increases
A) the slope of the budget line increases.
B) the slope of the budget line does not change and the budget line shifts to right.
C) the slopeof the budget line does not change and the budget line shifts to left.
D) the slpe of the budget line decreases.
E) the slope of the budget line first increases and then decreases.

Answer: B

6) An economist defines preference as
A) an individual's choices of goods.
B) a utility function.
C) the likes and dislikes of an individual.
D) a characteristic similar to temperature.
E) the highest level of satisfaction attainable.

Answer: C

7) Utility is best defined as
A) the value of a good.
B) the additional satisfaction received from consuming another unit of a good.
C) equal to the price of a good.
D) the benefit or satisfaction from consuming goods and services.
E) the practical usefulness of a good.

Answer: D

8) The additional utility derived from the last unit of a good consumed is
A) marginal utility per dollar spent.
B) marginal utility.
C) a unit of utility.
D) total utility.
E) average utility.

Answer: B

9) As increasing quantities of a good are consumed
A) marginal utility increases.
B) marginal utility decreases.
C) marginal utility remains unchanged.
D) total utility increases at an increasing rate.
E) total utility decreases.

Answer: B

10) Suppose John can consume apples, oranges, and pears. If John increases his consumption of oranges, *ceteris paribus*, marginal utility theory assumes that the marginal utility of
A) oranges, apples, and pears all decrease.
B) apples decreases.
C) oranges decreases.
D) oranges remains constant.
E) pears decreases.

Answer: C

11) Complete the following sentence. Marginal utility equals
A) total utility divided by the total number of units consumed.
B) the inverse of total utility.
C) the area below the demand curve but above market price.
D) total utility divided by price.
E) the slope of the total utility curve.

Answer: E

12) Total utility is always
A) decreasing when marginal utility is decreasing.
B) increasing when marginal utility is positive.
C) less than marginal utility.
D) decreasing when marginal utility is increasing.
E) greater than marginal utility.

Answer: B

Use the table below to answer the following question(s).

Table 7.2

Quantity	Utility	Marginal Utility
0	0	
		30
1	30	
		12
2	*A*	
		5
3	*B*	
		C
4	50	

13) Refer to Table 7.2. The value for *A* is
A) 30.
B) 47.
C) 0.
D) 42.
E) 18.

Answer: D

14) Select the best answer: A household's consumption choices are limited by

A) prices.

B) its budget line.

C) its preferences.

D) income.

E) its ability to calculate.

Answer: B

Use the table below to answer the following question(s).

Table 7.4

Bags of Popcorn	Marginal Utility	Bottles of Pop	Marginal Utility
1	120	1	120
2	100	2	70
3	80	3	60
4	70	4	40

15) Refer to Table 7.4. What is the total utility if 3 bags of popcorn and 2 bottles of pop are consumed?

A) 310

B) 660

C) 150

D) 490

E) not determinable without knowing the prices

Answer: D

16) If income is fully spent and the marginal utility-per-dollar spent is equal for all goods, then

A) total utility is maximized.

B) marginal utility is maximized.

C) the number of units of each good must be equal.

D) a consumer could not be better off even with more income.

E) the proportion of income spent on each good must be equal.

Answer: A

17) Sarah can consume either pizzas or hamburgers. The price of a hamburger is \$1 and the price of a pizza is \$5. Let MU_h be the marginal utility of hamburgers and MU_p be the marginal utility of pizzas. In consumer equilibrium, what must the ratio MU_h/MU_p equal?

A) 1/5.

B) 1/6.

C) 1/1.

D) 5/1.

E) Additional information is required.

Answer: A

18) Let MU_A and MU_B stand for the marginal utility of goods *A* and *B*, respectively. Let P_A and P_B stand for the price of goods *A* and *B*, respectively. Assume that MU_A and MU_B are equal each other, and P_A is greater than P_B. In this case, consumers are better off if they consume

A) equal amount of goods *A* and *B*.
B) none from both goods.
C) zero of good A and all good *B*.
D) less of good *A* and more of good *B*.
E) more of good *A* and less of good *B*.

Answer: D

19) Let MU_A=8 and MU_B=20. Let P_A=4 and P_B=5. Advise Sarah how to maximize her utility.

A) increase the price of good *A*
B) consume eqaul amount of both goods
C) consume more of good *B* and less of good *A*
D) decrease the price of good *B*
E) consume more of good A and less of good B

Answer: C

20) Samir consumes apples and bananas and is in consumer equilibrium. The marginal utility of the last apple is 10 and the marginal utility of the last banana is 5. If the price of an apple is $0.50, then what is the price of a banana?

A) $0.05
B) $0.25
C) $0.50
D) $1.00
E) $0.10

Answer: B

21) Suppose a consumer spends all his income. His marginal utility per dollar spent on *X* is 4 and marginal utility per dollar spent on *Y* is 2. We know that

A) the price of *Y* must be one-third the price of *X*.
B) utility is maximized.
C) utility can be increased by decreasing the consumption of *X* and increasing the consumption of *Y*.
D) the price of *Y* must be eight times the price of *X*.
E) utility can be increased by increasing the consumption of *X* and decreasing the consumption of *Y*.

Answer: E

Use the table below to answer the following question(s).

Table 7.4

Bags of Popcorn	Marginal Utility	Bottles of Pop	Marginal Utility
1	120	1	120
2	100	2	70
3	80	3	60
4	70	4	40

22) Refer to Table 7.4. Henry is maximizing his utility by consuming 3 bags of popcorn and 3 bottles of pop. What is the ratio of the price of popcorn to the price of pop?

A) 4/3
B) 3/4
C) 1
D) 1/2
E) 6/5

Answer: A

23) Squid costs $2 per kilogram and octopus costs $1 per kilogram. Jacques buys only octopus and gets 10 units of utility from the last kilogram he buys. Assuming that Jacques has maximized his utility, his marginal utility (in units) from the first kilogram of squid must be

A) more than 10.
B) more than 20.
C) less than 20.
D) less than 10.
E) zero.

Answer: C

24) The first can of Sprite Jack drinks yields 22 units of utility and the second can yields an additional 12 units of utility. How much units of utility in total would the two cans of Sprite yield for Jack?

A) 46
B) 34
C) 17
D) 2
E) 36

Answer: B

25) Ron starts out in consumer equilibrium, consuming two goods, X and Y. The price of Y rises. At this point,

A) $MU_X/P_X > MU_Y/P_Y$, and Ron should decrease his consumption of Y.
B) $MU_X/P_X > MU_Y/P_Y$, and Ron should increase his consumption of Y.
C) $MU_X/P_X < MU_Y/P_Y$, and Ron should decrease his consumption of Y.
D) $MU_X/P_X < MU_Y/P_Y$, and Ron should increase his consumption of Y.
E) none of the above.

Answer: A

Use the table below to answer the following question(s).

Table 7.6

Units of *X*	Total Utility (*X*)	Units of *Y*	Total Utility (*Y*)
0	0	0	0
1	9	1	49
2	17	2	90
3	24	3	110
4	30	4	118
5	35	5	124
6	39	6	129
7	42	7	132
8	44	8	133
9	45	9	132
10	44	10	130

26) Refer to Table 7.6. If both *X* and *Y* are free goods, how many of each should be consumed to maximize total utility?

A) 5 units of *X* and 8 units of *Y*

B) 2 units of *X* and 2 units of *Y*

C) 1 unit of *X* and 1 unit of *Y*

D) 9 units of *X* and 8 units of *Y*

E) 10 units of *X* and 10 units of *Y*

Answer: D

27) Refer to Table 7.6. If both *X* and *Y* are free goods, and total utility is maximized, then

A) the marginal utility of *X* is minimized and the marginal utility of *Y* is minimized.

B) consumption of each good will be infinite.

C) total utility equals 178.

D) the marginal utility of *X* does not equal the marginal utility of *Y*.

E) the marginal utility of *X* is maximized and the marginal utility of *Y* is maximized.

Answer: C

28) If total utility is increasing, marginal utility

A) is increasing as well.

B) is negative.

C) is positive with the possibility of either increasing or decreasing.

D) is between zero and one.

E) could be either positive or negative.

Answer: C

29) Mrs. Smith's child does not want potato chips for dinner. This implies that the marginal utility of potato chips for Mrs. Smith's child is

A) positive and less than total utility.

B) positive and greater than total utility.

C) zero.

D) one.

E) negative.

Answer: E

30) If the price of good *X* increases,

A) the marginal utility from the consumption of the last unit of *X* increases.

B) the marginal utility per dollar spent on *X* increases.

C) the total utility from the consumption of *X* increases.

D) the consumption of *X* decreases.

E) A and D.

Answer: E