Schuetze Lab 8

1. If *A* and *B* are two consumption bundles, which of the following statements is consistent with utility being an ordinal, rather than a cardinal, concept?
   A) *A* provides me with twice as much satisfaction as *B*.
   B) I prefer *A* to *B* by an amount equal to 6.5 utils.
   C) I prefer *A* to *B*.
   D) I prefer *B* to *A* by a very small margin—only 1.5 utils.

2. For ordinary goods, as we move down an indifference curve:
   A) the slope gets flatter.
   B) the slope gets steeper.
   C) the slope stays the same.
   D) total utility decreases.

3. LaToya sees honey and sugar as perfect substitutes. She is always willing to substitute 1 teaspoon of honey for 2 teaspoons of sugar. The marginal rate of substitution of sugar for honey is:
   A) 1.
   B) 1/2.
   C) 2.
   D) undefined.

4. Indifference curves that exhibit a diminishing marginal rate of substitution are:
   A) concave to the origin.
   B) upward sloping over part of their length.
   C) downward-sloping straight lines.
   D) convex to the origin.

5. A consumer maximizes utility when, given her income, she chooses a consumption bundle where:
   A) the marginal utility of each good is equal.
   B) the highest indifference curve is tangent to the budget line.
   C) the marginal rate of substitution is highest.
   D) the marginal utility of each good is highest.

6. The relative price rule says that at the optimal consumption bundle the *MRS* between two goods must be equal to their relative price. This is equivalent to saying that:
   A) the marginal utility per dollar is the same for both goods.
   B) the marginal utility of each good consumed must be the same as that of the other.
   C) goods should be consumed in the same ratio as their relative price.
   D) the *MRS* is not equal to the ratio of marginal utilities.

7. After learning about indifference curves, Sandy realizes that her marginal rate of substitution of grapes for cheese is equal to two. Since the price of cheese is $3 while the price of grapes is $1, Sandy:
   A) should buy more grapes and less cheese.
   B) should buy more cheese and fewer grapes.
   C) is maximizing her utility.
   D) is on her highest possible indifference curve.

8. At the optimal consumption bundle, which of the following conditions does NOT hold?
   A) The marginal rate of substitution between any two goods is equal to the ratio of their prices.
   B) The indifference curve is tangent to the budget line.
   C) The marginal utility per dollar spent is equal for all goods consumed.
   D) None of the above is correct.

9. Mr. Black always consumes coffee and cream in fixed proportions—8 oz. of coffee to 1 oz. of cream. This implies that for Mr. Black the marginal rate of substitution of coffee for cream is:
   A) 1/8.
   B) 8.
   C) diminishing, but between 8 and 1.
   D) undefined.

10. Rhonda spends all her income on two goods: clothes and CDs. Place clothes on the vertical axis and CDs on the horizontal axis. Rhonda is currently consuming a bundle of the two goods, where the indifference curve is flatter than the budget line. To increase total utility, Rhonda, given her income, should:
    A) increase her consumption of clothes and decrease her consumption of CDs.
    B) increase her consumption of CDs and decrease her consumption of clothes.
    C) do nothing—she is consuming a bundle on her budget line.
    D) do none of the above—not enough information is given.

Answer Key

1. C
2. A
3. B
4. D
5. B
6. A
7. A
8. D
9. D
10. A

Problem:

Tommy has 4 Cal Ripken and 2 Nolan Ryan baseball cards. The prices of these baseball cards are $24 for Cal and $12 for Nolan. Tommy however would be willing to change 1 Cal card for 1 Nolan card

a. What is Tommy's marginal rate of substitution of Cal Ripken in place of Nolan Ryan baseball cards?

Tommy's marginal rate of substitution is 1; he is just willing to trade 1 Nolan Ryan card for 1 more Cal Ripken card.

b. Can Tommy buy and sell baseball cards to make himself better off? How?

Tommy's marginal rate of substitution is $MU_{Cal}/MU_{Nolan} = 1$ However, the relative price of a Cal Ripken card is $P_{Cal}/P_{Nolan} = \$15/\$12 = 1.25$. Since the marginal rate of substitution is less than the relative price, Tommy can make himself better off by selling 1 Cal Ripken card and buying Nolan Ryan cards

c. Suppose Tommy has traded baseball cards and now no longer wants to make any more trades. What is his marginal rate of substitution of Cal Ripken in place of Nolan Ryan cards now?

If Tommy can no longer benefit from trade, he must be consuming his optimal consumption bundle. That is, his marginal rate of substitution must be equal to the relative price; the relative price rule holds that says that $MU_{Cal}/MU_{Nolan} = P_{Cal}/P_{Nolan}$. Since we know that the relative price is 1.25, Tommy's marginal rate of substitution must also be 1.25.