Introduction to Microeconomics

Week 5

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Question 1

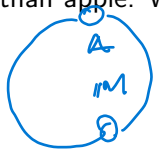
Joey has to choose between one melon, one apple and one orange. He likes melon better than orange, apple better than melon and orange better than apple. Which axiom of rationality do his choices violate?

A) Reflexivity

B) Transitivity

C) Completeness

D) All of the above



Question 2

Alisha likes chocolate and icecream equally. Which of the following functions is likely to represent her utility from the consumption of chocolates and icecreams?

A) $U(x, y) = x + y$ = k

B) $U(x, y) = x^{1/2} y^{-1/2}$ = k

C) $U(x, y) = xy$ = k

D) None of the above

Question 3

Alisha likes chocolate and icecream equally. What are her indifference curves like?

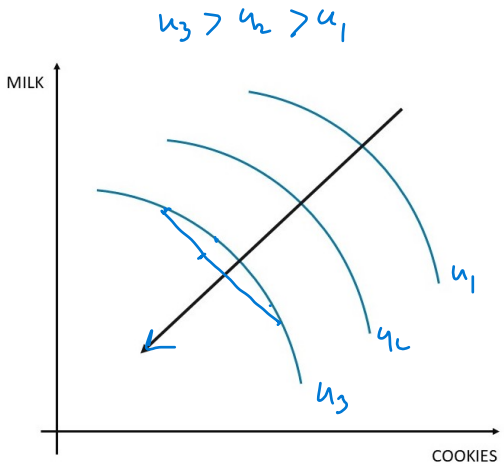
A) Convex to origin.

B) L shaped.

C) Circular.

D) None of the above.

Question 4



The diagram shows Molly's preferences over milk and cookies. Which of the following is/are NOT true?

A) Preferences are convex.

B) Molly likes both, milk and cookies, equally.

C) An increase in consumption of milk and cookies increases her happiness.

D) Molly prefers a combination of milk and cookies to only milk and only cookies.

Question 5

Rachel likes pizza but hates Coke. Consuming pizza makes her happier, whereas consuming Coke makes her unhappy. Assume pizza is on the x axis and Coke on the y axis. What would her indifference curves look like?

Question 6

A consumer has a consumption set $C = \{(a, b), (b, c), (a, c), (b, d), (d, a)\}$ for two goods. She states that her preferences are as follows:

$(a, b) \succsim (b, c)$

$(b, c) \precsim (a, c)$

$(b, d) \sim (d, a)$

$(d, a) \succ (a, c)$

$(b, c) \succ (d, a)$

Assume $a, b, c, d \in \mathbb{R}^+$. Which axiom is violated in her preferences?

A) Transitivity

B) Completeness

C) Reflexivity

D) No axiom is violated

Question 7

Sherlock's utility for consumption of two goods is given by the function $U(A, B)$. John observes Sherlock's utility function and defines his utility function V as $V(A, B) = \alpha + \left(U(A, B)\right)^2$ where $\alpha > 0$. Which of the following is true?

A) John and Sherlock have the same ordering over consumption bundles.

B) John's ranking of consumption bundles is different from Sherlock's.

C) It is indeterminate.

Question 8

Simon has the utility function $U(x, y) = (x + 2y)^2$. Which of the following statements is/are true for his preferences?

A) x and y are substitutes.

B) $MRS(x, y) = 2$.

C) $MRS(x, y) = -0.5$

D) Simon is willing to give up 2 units of y to obtain 1 unit of x to remain at a constant utility level.

Question 9

Sarah, Simon and Rachel are choosing to buy icecreams flavoured in butterscotch (B) and dark chocolate (D). Sarah is willing to forego 2 butterscotch to obtain one dark chocolate. Simon is willing to forego 1 butterscotch to obtain 3 dark chocolates. Rachel is indifferent to dark chocolates but loves butterscotch. All of them do this maintaining the same level of utility. Which of the following statements is/are correct?

A) Simon's MRS(D, B) is -3

B) Rachel's MRS(D, B) is zero.

C) Sarah's MRS(D, B) is -2.

D) All of the above

Reference Reading

1. *The Economy 2.0: Microeconomics* by CORE Econ.
2. *Introduction to Economic Analysis v. 1.0*
3. *Workouts in Intermediate Microeconomics 6e* by Hal Varian
4. *Microeconomics* by Jeffrey Perloff
5. *Microeconomics* by Pindyck and Rubenfield