

# 04-Axiomatic-Utility

- 1 (#1) Which axioms imply the following results:  
1. Every bundle lies on some indifference curve  
2. Indifference curves are smooth
- A (1) Continuity; (2) Non-satiation
  - ☒ (1) Completeness; (2) Continuity
  - C (1) Non-satiation; (2) Transitivity
  - D One or both of these results is *not* implied
- 2 (#2) What does the MRS between good  $x$  and  $y$  depend upon?
- A Marginal utility of  $x$
  - B Marginal utility of  $y$
  - C The level of utility at the indifference curve
  - ☒ Both
- 3 (#3) Kate has convex preferences. Suppose Kate's MRS of coldbrew for sushi at 12 pieces of sushi is  $|-4|$ . Is Kate's MRS at 8 pieces of sushi...
- A Higher: She's willing to give up more sushi for coldbrew
  - ☒ Lower: She's willing to give up less sushi for coldbrew
  - C Same: Her MRS is constant
  - D Ambiguous: Depends on specifics known only to Kate
- 4 (#4) We want to move from ordinal to cardinal utility  
What two features of ordinal utility *must* we preserve to maintain the "same preferences"?
- A Same ranking of bundles; Same marginal utility of each good
  - B Same marginal utility of each good; Same MRS between goods
  - ☒ Same ranking of bundles; Same MRS between goods
  - D Same level of utility of each bundle; Same marginal utility of each good

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