

CHAPTER 3: Preferences and Utility

3.1 Indifference curves

- a. may sometimes intersect.
- b. are contour lines only of a linear utility function.
- c. are convex if the utility function is quasi-concave.
- d. shift when prices change.

ANSWER: c

3.2 For an individual who consumes only two goods, x and y , the opportunity cost of consuming one more unit of x in terms of how much y must be given up is reflected by

- a. the individual's marginal rate of substitution.
- b. the market prices of x and y .
- c. the slope of the individual's indifference curve.
- d. none of the above.

ANSWER: b

3.3 If bundles of goods A and B lie on the same indifference curve, one can assume the individual

- a. prefers bundle A to bundle B .
- b. prefers bundle B to bundle A .
- c. enjoys bundle A and B equally.
- d. bundle A contains the same goods as bundle B .

ANSWER: c

Questions 3.4 and 3.5 refer to an individual whose utility function is given by

$$U(x, y) = 4x + 2y$$

3.4 With this utility function, the bundle (3,2) provides the same utility as the bundle

- a. (2, 3).
- b. (2, 4).
- c. (2, 5).
- d. (3, 3).

ANSWER: b

3.5 For this utility function, the *MRS*

- a. depends on the values of x and y .
- b. is always 0.
- c. is always 2.
- d. is always 4.

ANSWER: c

3.6 Which of these utility functions represent the same preferences as $U(x, y) = \sqrt{xy}$?

- a. $U(x, y) = 10\sqrt{xy}$.
- b. $U(x, y) = xy$.
- c. $U(x, y) = \ln x + \ln y$.
- d. All of the above represent the same preferences.

ANSWER: d

3.7 If utility is given by $U(x, y) = \sqrt{xy}$, then the person's *MRS* at the point $x = 5, y = 2$ is given by

- a. 0.4.
- b. 1.0.
- c. 2.5.
- d. 5.0.

ANSWER: a

3.8 If utility is given by $U(x, y) = x^2 + 2xy + y^2$, this person's indifference curves are

- a. parabolas.
- b. hyperbolas.
- c. concentric circles.
- d. straight lines.

ANSWER: d

3.9 Which of the following utility functions best represents the idea that two goods, x and y , are perfect complements?

- a. $U(x, y) = \sqrt{xy}$.
- b. $U(x, y) = x + y$.
- c. $U(x, y) = |x - y|$.
- d. $U(x, y) = \min(x, y)$.

ANSWER: d

3.10 If an individual's utility function is quasi-concave, his or her *MRS* will

- a. diminish as x is substituted for y .
- b. increase as x is substituted for y .
- c. be undefined except in special cases.
- d. always depend only on the ratio of x to y .

ANSWER: a

3.11 If utility is given by $U(x, y) = \min(x, 3y)$ then the bundle (3,2) provides the same utility as the bundle

- a. (1, 3).
- b. (2, 3).
- c. (4, 1).
- d. (4, 2).

ANSWER: c

3.12 Which of the following utility functions *would not* be consistent with the notion that x and y are both "goods" with positive marginal utilities?

- a. $U(x, y) = x^2 y$.
- b. $U(x, y) = x + y$.
- c. $U(x, y) = x\sqrt{y}$.
- d. $U(x, y) = x/y$.

ANSWER: d