Week of May 10, 2017

1. Draw indifference curves which represent each of the following kinds of preferences:

    *   Always want to have 4 units of good 1 with every unit of good 2.

    *   Always want to have 1 unit of good 1 with 3 units of good 2.

    *   Always willing to sacrifice exactly 3 units of good 1 for 2 units of good 2.

    *   Preferences where good 2 is actually a 'bad', but mixtures of goods and bads are preferred.

    *   Preferences where both goods are 'bads', but mixtures of bads are NOT preferred.

2. Donny has preferences over vacation days (x_2, a good) and working days (x_1, a bad). He is indifferent between the following bundles: (0,4), (4,5), (8,8) and (16,20). If he is working for x_1 days, and his boss asks him to work for one more minute, he will only do so if he receives extra $x_1/8$ vacation minutes in return (so his MRS=$x_1/8$).

    *   Draw Donny's indifference curve for the information above.

    *   Evaluate the MRS at each of the 4 bundles on his indifference curve.

    *   Suppose Donny's boss always says 'I will give you exactly one more day of vacation if you agree to work one more day.' How much will Donny agree to work?

3. Tim consumes only apples and bananas. He prefers more apples to fewer, but he gets tired of bananas. If he consumes fewer than 29 bananas per week, he thinks that 1 banana is a perfect substitute for 1 apple. But you would have to pay him 1 apple for each banana beyond 29 that he consumes. The indifference curve that passes through the consumption bundle with 30 apples and 39 bananas also passes through the bundle with A apples and 21 bananas, where A equals
    a. 25   b. 28   c. 34   d. 36   e. None of the above

4. Molly's utility function is U(x, y) = y + 4$x^{1/2}$. She has 25 units of x and 12 units of y. If her consumption of x is reduced to 0, how many units of y would she need in order to be exactly as well off as before?
    a. 48   b. 37   c. 32   d. 112   e. None of the above.

5. Janet consumes x and y together in fixed proportions. She always consumes 2 units of x for every unit y. One utility function that describes her preferences is
    a. U(x, y) = 2xy.
    b. U(x, y) = 2x + y.
    c. U(x, y) = x + 2y.
    d. U(x, y) = min {2x, y}.
    e. U(x, y) = min{x, 2y}.

6. Isabella's utility function is U(x, y) = 4min{x, y} + y. If we draw her indifference curves with x on the horizontal axis and y on the vertical axis, these indifference curves are
   a. L-shaped with kinks where x = y.
   b. L-shaped with kinks where x = 5y.
   c. made up of two line segments that meet where x = y. One of these line segments is horizontal and the other has slope −4.
   d. made up of two line segments that meet where x = 5y. One of these line segments is vertical and the other has slope −1.
   e. V-shaped with kinks where x = 4y.

7. Ernie's utility function is U(x, y) = 32xy. He has 10 units of good x and 8 units of good y. Waldo's utility function for the same two goods is U(x, y) =3x + 5y. Waldo has 9 units of x and 13 units of y.
   a. Waldo prefers Ernie's bundle to his own, but Ernie prefers his own bundle to Waldo's.
   b. Each prefers the other's bundle to his own.
   c. Neither prefers the other's bundle to his own.
   d. Ernie prefers Waldo's bundle to his own bundle, but Waldo prefers his own bundle to Ernie's.
   e. Since they have different preferences, there is not enough information to determine who envies whom.

8. Ike's utility function is U(x, y) = xy. His MRS=y/x. Ike consumes 2 units of x and 8 units of y.
   a. Ike would be willing to make small exchanges of x for y in which he would give up 4 units of x for every unit of y he got.
   b. Ike would be willing to trade away all of his x for y as long as he got more than 4 units of y for every unit of x he gave up.
   c. Ike will always be willing to make trades at any price if he does not have equal amounts of the two goods.
   d. Ike likes x and y equally well so he is always willing to exchange 1 unit of either good for more than 1 unit of the other.
   e. None of the above.