

Name: **KEY**
ECON 201—Montgomery College
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EXAM 2

- There are 110 possible points on this exam. The test is out of 100.
- You have one class session to complete this exam, but you should be able to complete it in less than that.
- Please turn off all cell phones and other electronic equipment.
- You are allowed a calculator for the exam. This calculator cannot be capable of storing equations. This calculator cannot double as a cell phone.
- Be sure to read all instructions and questions carefully.
- Remember to show all your work.
- Try all questions! You get zero points for questions that are not attempted.
- *Please print clearly and neatly.*

Part I: Matching. Write the letter from the column on the right which best matches each word or phrase in the column on the left. You will not use all the options on the right and you cannot use the same option more than once.

2 points each.

- | | |
|--|---|
| 1. C Absolute advantage | A. An increase in how much one gets while decreasing the amount others get. |
| 2. F Balance of payments | B. An increase in how much one gets without any change to what others get. |
| 3. E Compensating differentials | C. Determined by who produces the most |
| 4. H Lorenz curve | D. Determined by who sacrifices the least |
| 5. B Positive sum game | E. Explains why fun jobs should have a lower salary. |
| 6. G Purchasing power parity | F. Explains why the trade deficit is only half of what's going on. |
| 7. A Rent | G. Like inflation but for across space rather than time. |
| | H. Represents the actual distribution of income or wealth. |
| | I. Exports minus imports |

1. *Unlike comparative advantage—which considers how much is sacrificed—absolute advantage looks at only what could be produced. Who can produce the most?*
2. *The balance of payments states that $NX+CA=0$, or that the net flow of goods and services plus the net flow of investment equals zero. When evaluating how much the trade deficit matters, remember it's only half of what's going on; it is an arbitrary distinction between the current account (net exports) and the capital account (net investment).*
3. *“Differences in working conditions are offset by differences in wages” describes this concept. With so many people who want to do a fun job, the additional supply causes the price—the wage—to fall.*
4. *The 45-degree line represents a perfectly equal distribution of wealth or income. The Lorenz curve is the actual distribution: the percent of wealth or income, say, the bottom 20% of the population has or the top 5% of the population has.*
5. *If one person is made better off and everyone else is exactly the same, the society as a whole is better off.*
6. *The purchasing power parity adjusts for how much a single unit of currency can buy in a particular country. This is much like inflation: how much can a single currency unit buy at a particular time.*
7. *Rent-seeking is a zero sum game (though sometimes it's a negative sum game). Rent is when someone increases their wealth without*

increasing the wealth of society; the only way to do that is to lower the wealth of others.

Part II: Multiple Choice. *Choose the best answer to the following.*
4 points each.

8. We've discussed that income equality had a greater justification than simply good feelings. What is the economic argument in favor for reallocation, *ceteris paribus*?
- It increases productivity
 - It increases total utility**
 - It decreases waste
 - A & C
 - None of the above

Much like the Fundamental Theorem of Exchange, reallocation, ceteris paribus, increases total utility. By taking money from those with a low marginal value of money and giving it to those with a high marginal value of money, aggregate satisfaction increases. "All other things being equal" is an important qualifier here: if you reallocate, you can make total utility on net fall because of a drop in efficiency.

9. In theory, poor countries should catch up with wealthy countries. Why?
- Because poor countries have relatively little capital**
 - Because poor countries will trade more with wealthy countries
 - Because wealthy countries tend to have stable governments
 - A & C
 - None of the above

There is diminishing productivity of capital; because wealthy countries have a lot of capital and poor countries have little capital, additional capital in poor countries add a lot of productivity. Therefore, it's relatively easy to increase income/productivity in poor countries compared to wealthy countries. Thus, poor countries should grow faster and catch up to poor ones.

10. If the Gini Ratio for a country is high, that means:
- That country's average income is low compared to other countries.
 - That country has a lot of income inequality compared to other countries.**
 - That country has a lot of income equality compared to other countries.
 - A & B
 - None of the above

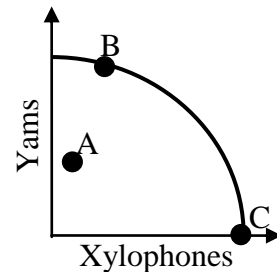
The Gini Ratio is defined as the area between the 45-degree line and the Lorenz Curve (actual distribution of income) divided by the area between the 45-degree line and the x-axis. If the numerator is large, Gini is large, and the distribution of income is very unequal. Gini, however, has nothing to say about average income. There are countries that are equal and poor and those that are equal and rich.

11. Suppose you're a bank in England, where the pound is the local currency. If you do **not** intend on purchasing any U.S. goods or services, why would you allow people to give you U.S. dollars in exchange for British pounds?
- You might be interested in investing in European companies.
 - You might be interested in purchasing stock in a U.S. company.
 - You might be interested in buying U.S. government bonds.
 - B & C**
 - None of the above

Both B and C are types of investment; the other major reason foreigners want U.S. dollars is to invest in the United States. We see this money come back in the form of the capital account. Investing in European companies would require the Euro, not the dollar.

12. Consider the production possibilities frontier below. Which points indicate productive efficiency?

- A
- B
- C
- B & C**
- None of the above



Both B and C are on the PPF which means neither leave resources unutilized. A is suboptimal: without sacrificing anything, you could have more of either or both goods.

13. True or false: it is possible to have allocative efficiency without productive efficiency.
- True, because sometimes people don't want as much as could be produced.
 - True, because that bundle may represent a maximum level of production but it doesn't mean people want that bundle.
 - False, because it would be possible to get more of something without sacrificing anything.**
 - False, because you could always produce more if you sacrifice something else.
 - None of the above

Imagine an economy was not productively efficient; perhaps it chooses option A from the previous question. Could that not be how many yams and xylophones a country wants? Keep in mind that the PPF is a model; it would be impossible to explicitly include all products because each product needs its own axis. So in the above example, there are only two products: yams and xylophones.

More is better and if you produce at A, you can get more yams without sacrificing any xylophones (and vice versa). Thus, A cannot be allocatively efficient; it can't be the best bundle because there is a strictly better bundle available.

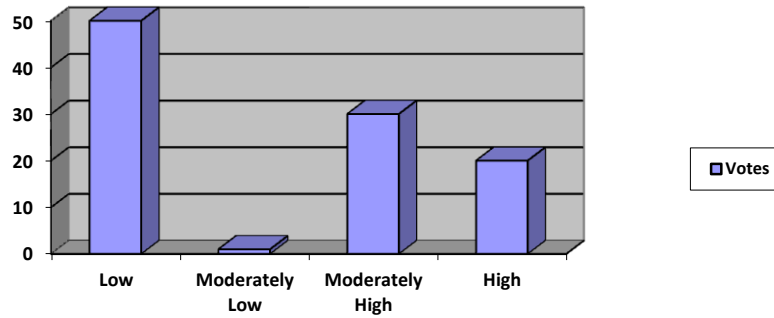
14. Which of the following is an example of the Fundamental Theorem of Exchange in action?
- a. Jill buys her favorite snack—roasted snake with sardines—which allows the store owner to stay open.
 - b. Greg and Mary, a married couple, go out to eat together.
 - c. Homer getting a mystery box (contents unknown) as payment for work.
 - d. A & B**
 - e. None of the above

I personally wouldn't consider roasted snake with sardines appetizing but Jill apparently does; she bought something from someone and the store owner sold it for a price higher than it took to produce (otherwise, s/he wouldn't have made the money to stay out). Both parties are better off, even if the store owner is much better off than she. (Mutual benefit isn't the same as equal benefit.)

Greg and Mary also engaged in mutually beneficial exchange. Just as you can trade in money and goods, you can also trade in time. Each gave up time doing something to spend time with the other. This exchange enables both parties to be better off. And since they know each other so well, they are unlikely to regret the exchange.

But Homer got a mystery box; he doesn't know what's inside. Therefore, it's possible it's not mutually beneficial because there could be something undesirable in there. He could regret his exchange of labor for box.

15. Consider the following distribution of 101 voters on how much the country should spend on the army (there are 50 voters for Low, one voter for Moderately Low, etc.). Assume all voters vote.



If Candidate Nixon is for Moderately High spending and Candidate Kennedy is for Moderately Low spending, how many votes does each candidate get?

- Nixon—50...Kennedy—1
- Nixon—30...Kennedy—1
- Nixon—30...Kennedy—51
- Nixon—50...Kennedy—51**
- None of the above

The Low voters don't find either candidate ideal but find Kennedy closest to their ideal and will vote for him. High voters also don't find either candidate ideal but Nixon is closest and will vote for Nixon. The one moderately low voter will vote for Kennedy and the 30 moderately high voters will vote for Nixon, leaving 51 Kennedy and 50 Nixon.

16. We discussed many reasons for why economic growth occurs. Which of the following was one of the reasons?
- Availability of education
 - Rule of law**
 - Lots of capital and equipment
 - B & C
 - None of the above

The main theme of origins of economic growth was economic freedom and the rule of law—equal treatment under the law—is one such consideration. While education and capital are also important for growth, they are less fundamental than economic freedom.

17. Which of the following is an example of rent (in the public choice sense)?
- Using the threat of violence to take someone's money.
 - Selling steel at an inflated price; people buy it only because there are high tariffs on steel.
 - Charging someone to borrow one of your cars.
 - A & B**
 - All of the above

B is clearly rent; the higher price is only sustainable because of barriers to trade. But A is also rent: theft and robbery increases one's own well-being without increasing the well-being of society. C, though, is not correct. While it is rent in the everyday language sense, it is not in the public choice sense. That transaction was mutually beneficial; social totals increased.

18. If income inequality increases, what must that mean?
- The rich are getting richer and the poorer are getting poorer.
 - The rich are getting less rich and the poor are just as poor as they were before.
 - The rich are getting richer and the poor are getting richer.
 - The rich are as rich as they were before, and the poor are getting poorer.
 - None of the above**

While A and D are possible causes of increased inequality (as is C is the richer are getting richer faster than the poor are getting richer), none of these are what must be going on.

19. Which of the following is an example of rational irrationality?
- A lawyer not knowing the name of every U.S. state and its capital.
 - A construction worker avoiding black cats because they are bad luck.**
 - A firefighter who refuses to be near anything red, a color he's afraid of.
 - B & C
 - None of the above

Option A is rational ignorance—knowing the states and their capitals does not help the lawyer do her job or live her life. She is ignorant in geography but it is reasonable for her to be ignorant.

Option C is just being irrational. Yes, it doesn't make sense to fear the color red but if it's such an overpowering fear this person shouldn't be a firefighter: how would one get on the fire truck?

Option B is rational irrationality. That some cats are "bad luck" doesn't really make sense but the construction worker can do his job regardless of believing in that superstition. It's cheap to be unreasonable: he's rationally irrational.

Part III: Short Answer. Answer the following.

16 points each.

20. Do you support more or less income inequality? Briefly explain your reasoning using at least two justifications for why incomes differ (you can argue that they

are not that important or really important explanations for why incomes differ, but you must explain why each should matter in this discussion). You will be graded on your reasoning, not your position.

Position: *This is irrelevant for grading; it exists only to help me understand your arguments.*

Each justification should draw from our list of reasons why incomes differ. For reasons favoring more inequality, the reasoning should focus on the importance of incentivizing efficient action. For reasons favoring more equality, the reason should focus on diminishing marginal returns without a loss of total production.

In each case, you're not expected to explain why you think it's a big or small factor. The relative importance of, say, luck vs skill is a complicated question and beyond the scope of this course. It's only important for you to understand how these factors play a role in the income inequality discussion.

21. Four friends are working on an outdoor project. They are focusing on two tasks: carrying wood and cutting wood. The accompanying table indicates how many pounds of wood they can carry or number of accurate cuts they can make over the course of an hour.

Friend	Pounds of Wood Carried	Number of Accurate Cuts Made
Sheldon	20	10
Ursula	50	20
Amber	80	60
Tommy	70	50

Determine who has the comparative advantage in carrying wood and who has the comparative advantage in cutting wood.

First, let's check it for wood carried.

Sheldon: $10 / 20 = 0.500 \text{ cuts}$

Ursula: $20 / 50 = 0.400 \text{ cuts}$

Amber: $60 / 80 = 0.750 \text{ cuts}$

Tommy: $50 / 70 = 0.714 \text{ cuts}$

While Amber has the absolute advantage in carrying wood, Ursula has the comparative advantage. It's cheapest for her to carry wood because she gives up the fewest cuts.

Now for cuts made.

Sheldon: $20 / 10 = 2.0$ pounds

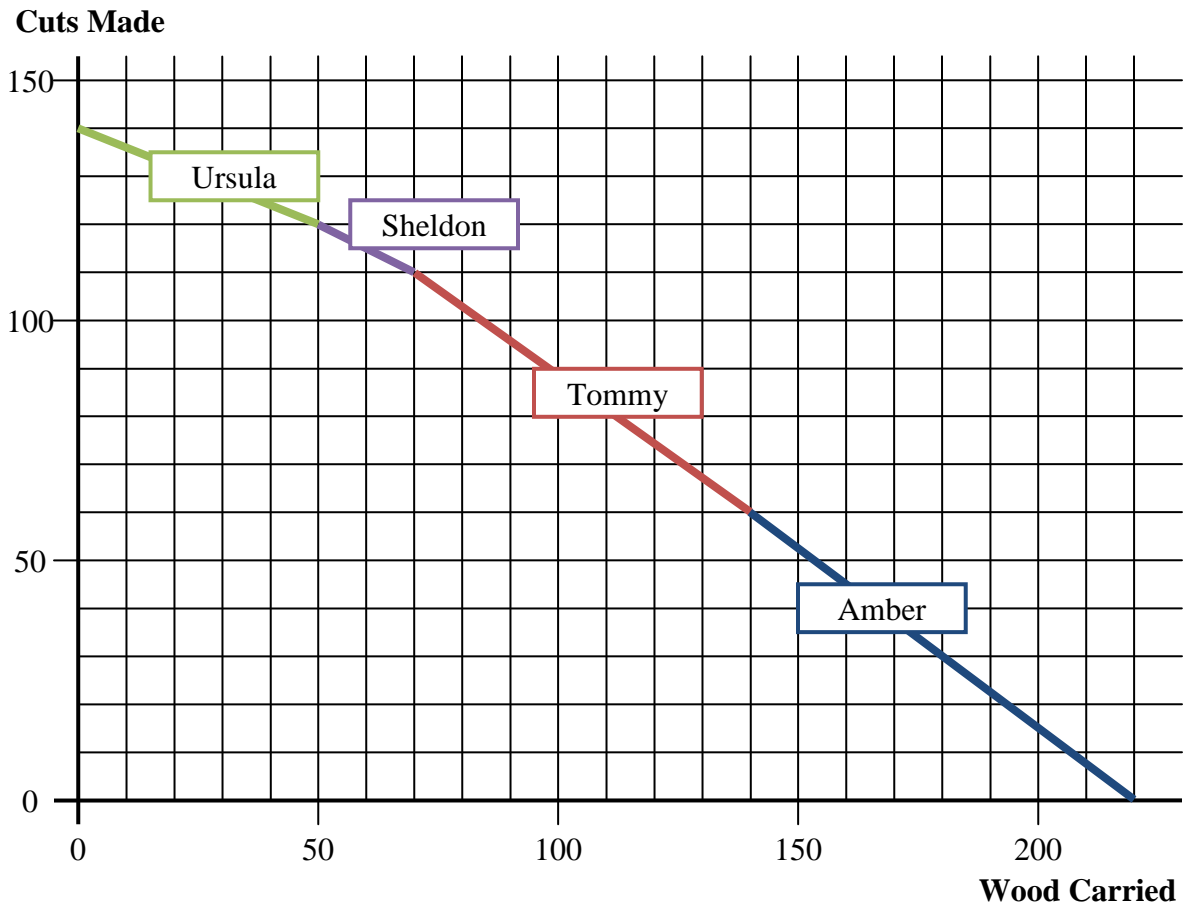
Ursula: $50 / 20 = 2.5$ pounds

Amber: $80 / 60 = 1.3$ pounds

Tommy: $70 / 50 = 1.4$ pounds

Amber has the comparative advantage in cutting wood; she gives up the least amount of wood carrying when she cuts wood.

22. Use the information from the previous question to construct a production possibilities frontier. Use the diagram provided, making sure to label each part of your production possibilities frontier. Be sure it's to scale!



You'll note that Tommy's line has a virtually identical slope as Amber's. This is because the cost of cutting wood is so similar: 1.3 pounds vs. 1.4 pounds.