

Microeconomics, comparative advantage, final exam practice problems

(The attached PDF file has better formatting.)

*Question 1.1: Opportunity Costs

A farmer has land which can grow either wheat or barley but has no other uses.

- In 20X5, it takes 10 hours and \$100 of supplies to grow one bushel of wheat or barley.
- In 20X6, it takes **10** hours and \$110 of supplies to grow one bushel of wheat and **11** hours and \$110 of supplies to grow one bushel of barley.
- inflation from 20X5 to 20X6 is 10%.

Which of the following is true about the change in the opportunity costs of wheat and barley from 20X5 to 20X6?

	<i>Opportunity Costs</i>	
	<i>Wheat</i>	<i>Barley</i>
A	increase	decrease
B	decrease	increase
C	decrease	no change
D	increase	no change
E	no change	increase

Answer 1.1: B

In real dollars, the \$110 for supplies in 20X6 is the same as the \$100 for supplies in 20X5. The labor needed in 20X6 increased 10% for growing barley but not for growing wheat.

- In 20X5, growing 1 bushel of wheat takes as much labor (10 hours) as growing one bushel of barley.
- In 20X6, growing 1 bushel of wheat takes as much labor (10 hours) as growing $10/11 = 0.909$ bushels of barley.

The opportunity cost of growing wheat declines from 20X5 to 20X6, and the opportunity cost of growing barley increases.

*Question 1.2: Economic Costs

Which of the following best describes the cost of passing Course C?

- A. The cost of books, manuals, and seminars used to pass Course C.

- B. The alternative uses of the time spent studying for Course C and the money spent on study materials for Course C (books, manuals, seminars, exam fees).
- C. The monetary value of the time and materials used for Course C.
- D. The market value of an actuarial student who has passed Course C minus the market value of the same student before passing Course C.
- E. All of the above represent different types of cost used by economists.

Answer 1.2: B

The cost is the value of the next best opportunity.

*Question 1.3: Efficient Suppliers

When are you considered to be the most efficient at producing food?

- A. When the resources you need to produce food is less than the resources you need to produce other goods.
- B. When your cost of producing food is less than your cost of producing other goods.
- C. When your relative cost of producing food is less than others' relative cost of producing food.
- D. When your dollar cost of producing food is less than others' dollar cost of producing food.
- E. When the market price of the food you produce is lower than the market price of the food that others produce.

Answer 1.3: C

Most efficient means *having the greatest relative efficiency*. Microeconomics uses relative efficiency. The cost of the resources is their alternative use. The cost of producing food is the amount of clothing (or other goods) that could be produced with the same time and resources.

*Question 1.4: Comparative Advantage

- Jacob needs 6 hours to make a loaf of bread and 5 hours to make a flask of wine.
- Rachel needs 5 hours to make a loaf of bread and 6 hours to make a flask of wine.
- Leah needs 4 hours to make a loaf of bread and 4 hours to make a flask of wine.

Jacob, Rachel, and Leah have the same tastes for bread and wine.

All but which of the following are true?

- A. Leah has a comparative advantage over Rachel in making bread.
- B. Leah has a comparative advantage over Rachel in making wine.
- C. Rachel has a comparative advantage over Jacob in making bread.
- D. Jacob has a comparative advantage over Rachel in making wine.
- E. Jacob has a comparative advantage over Leah in making wine.

Answer 1.4: A

We compute the cost of producing a loaf of bread in terms of flasks of wine:

- ~ Jacob: A loaf of bread takes 6 hours = $6/5 = 1.200$ flasks of wine
- ~ Rachel: A loaf of bread takes 5 hours = $5/6 = 0.833$ flasks of wine
- ~ Leah: A loaf of bread takes 4 hours = $4/4 = 1.000$ flasks of wine

Rachel is most efficient at baking bread; Jacob is least efficient.

The economy has only two goods, so the relative efficiency at producing wine is the reverse of the relative efficiency at baking bread.

The tastes for bread and wine do not affect the relative efficiencies at production.

Statements A and B: Rachel has a comparative advantage over Leah in making bread, so Leah has a comparative advantage over Rachel in making wine.

Statements C and D: Rachel has a comparative advantage over Jacob in making bread, so Jacob has a comparative advantage over Rachel in making wine.

Statement E: Leah has a comparative advantage over Jacob in making bread, so Jacob has a comparative advantage over Leah in making wine.

*Question 1.5: Comparative Advantage

Jacob can produce a flask of wine for \$5 and a loaf of bread for \$3. Rachel can produce a flask of wine for \$4 and a loaf of bread for \$2. All but which of the following are true?

- A. Jacob has a comparative advantage in producing wine
- B. Rachel has a comparative advantage in producing bread
- C. Rachel has an absolute advantage in producing wine
- D. Rachel has an absolute advantage in producing bread
- E. Rachel will produce wine and sell it to Jacob

Answer 1.5: E

Statement A: Jacob's relative cost of producing wine is $\$5 / \$3 = 1.667$ loaves of bread. Rachel's relative cost of producing wine is $\$4 / \$2 = 2.000$ loaves of bread. Jacob is more efficient at producing wine *relative to baking bread*.

Statement B: Jacob's relative cost of producing bread is $\$3 / \$5 = 0.600$ flasks of wine. Rachel's relative cost of producing wine is $\$2 / \$4 = 0.500$ flasks of wine. Rachel is more efficient at producing bread *relative to producing wine*.

Statements C and D: Rachel can produce both bread and wine for less money than Jacob, so Rachel has the absolute advantage in both.

Statement E: Jacob has the relative advantage in producing wine, so he produces wine and sells it to Rachel. Rachel has the relative advantage in producing bread, so she produces bread and sells it to Jacob.

*Question 1.6: Relative Costs in Asia

The table below shows the labor needed in Asia and America to produce food and clothing.

	<i>Asia</i>	<i>America</i>
One bushel of food	6 hours	8 hours
One suit of clothing	2 hours	4 hours

The *relative* cost of producing food in Asia is *best expressed* as

- A. 6 hours of labor
- B. 3 bushels of food per suit of clothing
- C. $\frac{1}{3}$ bushel of food per suit of clothing
- D. 3 suits of clothing per bushel of food
- E. $\frac{1}{3}$ suit of clothing per bushel of food

Answer 1.6: D

A suit of clothing takes 2 labor hours to make; a bushel of food takes 6 labor hours to grow. A bushel of food uses as much labor as 3 suits of clothing.

*Question 1.7: Production Efficiency

Which continent is more efficient in producing food and which continent is more efficient in producing clothing?

- A. Asia is the more efficient producer of both food and clothing.
- B. America is the more efficient producer of both food and clothing.
- C. Asia is the more efficient producer of food, and America is the more efficient producer of clothing.
- D. America is the more efficient producer of food, and Asia is the more efficient producer of clothing.
- E. Both countries are equally efficient producers of food and clothing.

Answer 1.7: D

One bushel of food is 3 suits of clothing for Asia but only 2 suits of clothing for America, so America is better at producing food and Asia is better at producing clothing.

*Question 1.8: Benefits of Trade

When can trade benefit both Asia and America?

- A. When Asia specializes in food production, and America specializes in clothing.
- B. When Asia specializes in clothing production, and America specializes in food.
- C. The countries can not gain from trade, because Asia has the lower costs of production for both food and clothing.
- D. The countries can not gain from trade, because America has a comparative advantage in the production of both goods.
- E. Trade benefits both countries regardless of who produces what.

Answer 1.8: B

Asia is better at producing clothing and America is better at producing food; they can trade to get the goods that they want to consume.