

**First midterm.** Look over the whole test before you begin. Good luck!

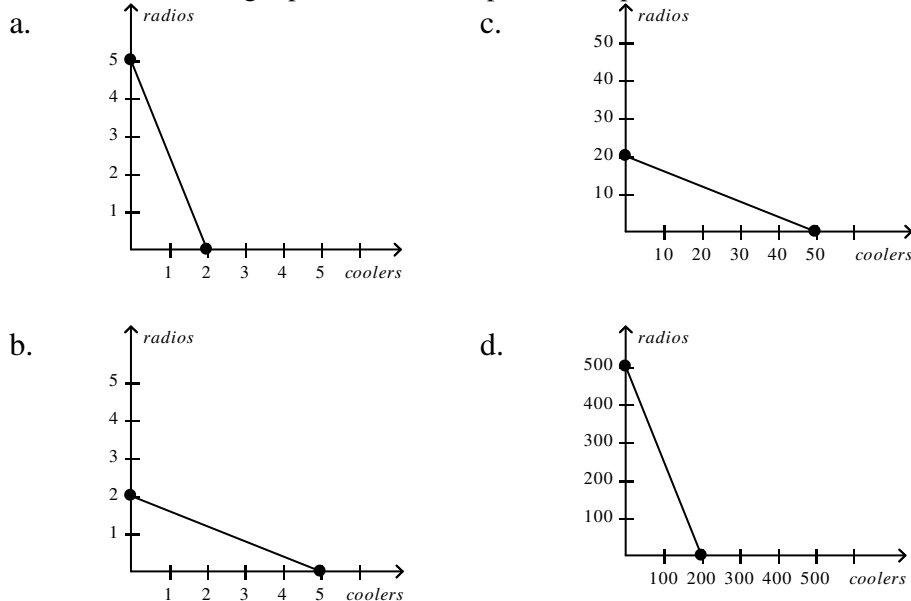
The exam has 22 multiple choice question at 5 pts each, and two longer questions for 30 points.

1. Economics is the study of
  - a. production methods.
  - b. how society manages its scarce resources.
  - c. how households decide who performs which tasks.
  - d. the interaction of business and government.
2. A PPF is bowed outward when
  - a. the more resources the economy uses to produce one good, the fewer resources it has available to produce the other good.
  - b. an economy is self-sufficient instead of interdependent and engaged in trade.
  - c. the rate of tradeoff between the two goods being produced is constant.
  - d. the rate of tradeoff between the two goods being produced depends on how much of each good is being produced.
  - e. PPFs cannot be bowed outward.
3. Which two groups of decision makers are included in the simple circular-flow diagram?
  - a. markets and government
  - b. households and government
  - c. firms and government
  - d. households and firms
  - e. farmers and ranchers
4. What would happen to the equilibrium price and quantity of peanut butter if the price of peanuts went up and health officials announced that eating peanut butter was good for you?
  - a. Price will rise and quantity will increase
  - b. Price will fall, and the effect on quantity is ambiguous.
  - c. Price will rise, and the effect on quantity is ambiguous.
  - d. Quantity will fall, and the effect on price is ambiguous.
  - e. Quantity will rise, and the effect on price is ambiguous.
5. Pens are normal goods. What will happen to the equilibrium price and quantity of pens if consumers' incomes increase and wages of pen-makers decrease?
  - a. Price will rise and quantity will increase
  - b. Price will fall, and the effect on quantity is ambiguous.
  - c. Price will rise, and the effect on quantity is ambiguous.
  - d. Quantity will fall, and the effect on price is ambiguous.
  - e. Quantity will rise, and the effect on price is ambiguous.
6. Suppose the price of a good falls from 110 to 90, while the quantity demanded rises from 95 to 105. Using the midpoint method, the elasticity of demand is:
  - a. 1
  - b. 1/3
  - c. 1/4
  - d. 1/5
  - e. none of the above
7. Suppose the price of bubble gum falls from 50 cents to 30 cents, and quantity demanded increases from 400 packs to 600 packs. Using the midpoint method, we would say demand for bubble gum is
  - a. inelastic.
  - b. elastic.
  - c. unit elastic.
  - d. perfectly inelastic.
  - e. perfectly elastic

Information for questions 8 through 13. Two countries, Aruba and Iceland, can produce two goods, coolers and radios. The tables below describe productivity. Fill out the blank table on the right-hand side.

	<u>Output from one labor hour</u>		<u>or Hours needed to make one</u>		<u>Opportunity cost of a</u>	
	Coolers	Radios	Cooler	Radio	Cooler	Radio
Aruba	1/2	1/5	2	5		
Iceland	1	1/4	1	4		

8) Which of the following represents Aruba's production possibilities frontier when 100 labor hours are available?



9) Consider the countries' opportunity costs. Aruba's opportunity cost of one cooler is

- 1/4 radio and Iceland's opportunity cost of one cooler is 3 radios.
- 2/5 radio and Iceland's opportunity cost of one cooler is 1/4 radios.
- 1/3 radios and Iceland's opportunity cost of one cooler is 1/4 radio.
- 2 1/2 radios and Iceland's opportunity cost of one cooler is 4 radios.
- None of the above

10) Consider absolute advantage (AA) and comparative advantage (CA). Which of the following is correct?

- Iceland has an AA in both goods but Aruba has a CA in radios.
- Aruba has an AA in both goods and a CA in coolers.
- Iceland has an AA in coolers, Aruba has an AA in radios, Iceland has a CA in coolers, Aruba has a CA in radios.
- Iceland has an AA in radios, Aruba has an AA in coolers, Iceland has a CA in coolers, Aruba has a CA in radios.
- Iceland has an AA in both goods but Aruba has a CA in coolers.

11) Consider who should specialize in what if the countries can trade. Aruba should specialize in the production of

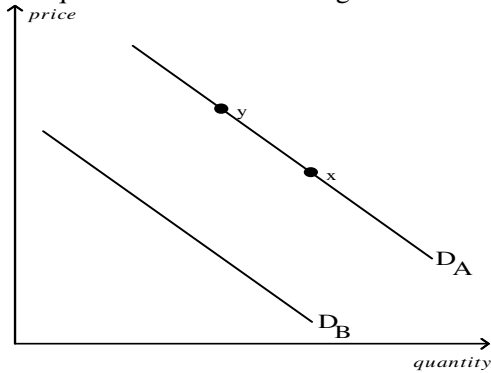
- coolers and Iceland should specialize in the production of radios.
- radios and Iceland should specialize in the production of coolers.
- both goods and Iceland should specialize in the production of neither good.
- neither good and Iceland should specialize in the production of both goods.
- both countries should produce both goods

12) Which of the following deals can benefit both countries?

- Iceland gives Aruba 1 cooler in exchange for 1 radio.
- Iceland gives Aruba 2 coolers in exchange for 1 radio.
- Iceland gives Aruba 5 coolers in exchange for 1 radio.
- Iceland gives Aruba 3 coolers in exchange for 1 radio.
- None of the above.

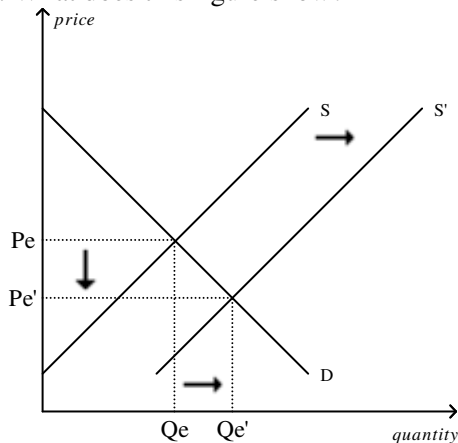
13. Suppose there is a change in relative productivities in Iceland. Iceland would not be able to gain from trade with Aruba if Iceland's opportunity cost of a radio changed to
- 1 cooler.
  - $1/4$  cooler.
  - $5/2$  cooler.
  - $2/5$  cooler
  - Aruba and Iceland can always gain from trade regardless of their opportunity costs.

Figure for questions 14-16. This figure shows demand for turkey in the United States.



14. Many people like both chicken and turkey, but no one eats chicken and turkey at the same meal. All else equal, a decrease in the price of chicken would cause a move from
- DA to DB.
  - DB to DA.
  - x to y.
  - y to x.
  - None of the above.
15. All else equal, a large number of people becoming vegetarians would cause a move from
- DA to DB.
  - DB to DA.
  - x to y.
  - y to x.
  - None of the above.
16. All else equal, an increase in the productivity of chicken farmers would cause a move from
- DA to DB.
  - DB to DA.
  - x to y.
  - y to x.
  - None of the above.

17. What does this figure show?



- an increase in demand and an increase in quantity supplied
- an increase in demand and an increase in supply
- a decrease in supply and an increase in quantity demanded
- an increase in quantity demanded and an increase in supply
- none of the above

Information for questions 18 and 19. Suppose there are two goods, "A" and "B." The following are the supply and demand equations for a good "A." Assume the price of good B is 10.

$$Q_A^S = 10 + 5P_A \quad Q_A^D = 50 - 2P_B - 5P_A$$

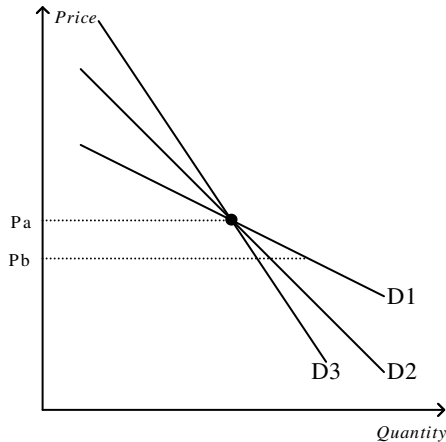
18. What are the equilibrium price and quantity of good A?

- a. I do not have enough information to answer this question.
- b.  $P^* = 2$ ,  $Q^* = 20$
- c.  $P^* = 6$ ,  $Q^* = 40$
- d.  $P^* = 3$ ,  $Q^* = 16$
- e.  $P^* = 4$ ,  $Q^* = 12$

19. Which of the following is true, judging from the equations?

- a. The two goods are inferior.
- b. The two goods are normal.
- c. The two goods are substitutes.
- d. The two goods are complements.
- e. None of the above.

20.



As price falls from  $P_a$  to  $P_b$ , which demand curve represents the most elastic demand?

- a. D1
- b. D2
- c. D3
- d. All are equally elastic.
- e. All are equally inelastic

21. Which of the following are true for a binding price floor?

- (i) causes a surplus (excess supply).
  - (ii) causes a shortage (excess demand).
  - (iii) the floor price is above the market equilibrium price.
  - (iv) the floor price is below the market equilibrium price.
- a. (i) only
  - b. (iii) only
  - c. (i) and (iii) only
  - d. (ii) and (iv) only
  - e. (ii) and (iii) only

22. What happens to price and quantity if a government removes a price ceiling that had been *binding*?

- a. Price increases, and the quantity sold in the market will increase.
- b. Price increases, and the quantity sold in the market will decrease.
- c. Price decreases, and the quantity sold in the market will increase.
- d. Price decreases, and the quantity sold in the market will decrease.
- e. Price does not change, and the quantity sold in the market will increase.

Written questions.

1) 15 pts. Plot the supply and demand curves corresponding to:  $Q^d = 10 - 2P$      $Q^s = P - 2$

2) 15 pts. Plot the PPF for the following situation. There are two goods: A and B. There are three groups of workers: groups I, II and III. The productivities of workers in each group are:

	<u>A worker in group</u>		
	<u>I</u>	<u>II</u>	<u>III</u>
Producing good A	2	1	1
Producing good B	1	1	2

That is, each worker in group I can produce two units of good A, or one unit of good B. Each worker in group II can produce one unit of good A, or one unit of good B. Each worker in group III can produce one unit of good A, or two units of good B.      There are 10 workers in each group.