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Here you will find the **practice questions** on the topic **Production Possibility Frontier (PPF)** and **Comparative & Absolute advantage** along with the answers.

N.B.- Few questions at the end do not contain answers. Try to solve those questions by yourselves and if you need any help, feel free to ask your student tutor.

PPF

Multiple Choice Questions:

1. The shape of a typical PPF is due to which of the following

a. Increasing Marginal Rate of Substitution
b. Increasing Marginal Opportunity cost
c. Constant Marginal Rate of Substitution
d. Decreasing Marginal Opportunity cost

2. A PPF can shift its position if and only if

a. If technology improves
b. If resources remain constant
c. If technology remains constant
d. None of these

3. The Marginal Opportunity Cost of producing Good X is

a. The marginal cost of Good X produced
b. The money spent on producing Good X
c. The cost of production
d. The quantity of good Y sacrificed

4. Massive unemployment shifts the PPF to the

a. Right
b. No effect
c. Left
d. None of the above

5. A student works for a book shop for several days during the holidays. She is offered the alternative of being paid $50 cash or choosing $80 worth of books from the shelves. What is the opportunity cost to the student of choosing the books?

a. $30
b. $50
c. $80
d. $0

Short questions

Question 1

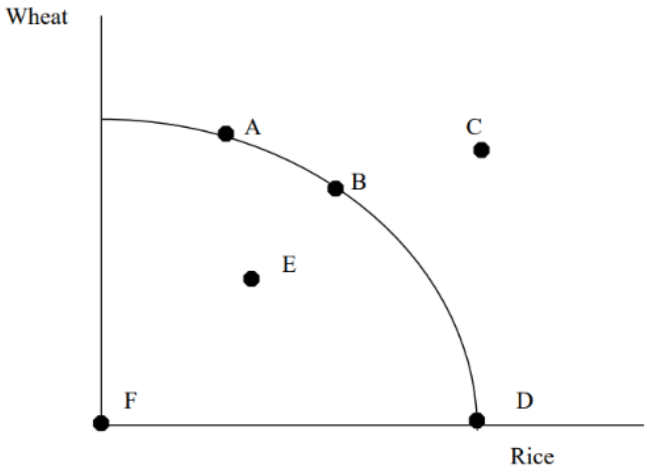
Alice has found herself on a desert island and must gather supplies to survive. Alice has 8 hours of useful stamina that she can use towards gathering firewood or coconuts. She finds that she can gather 1 bundle of firewood every two hours, or 6 coconuts every 4 hours.

a) In terms of a number of coconuts, what is the opportunity cost of 1 bundle of wood? What is the opportunity cost of 12 coconuts in terms of bundles of wood?

b) Bob just crash landed on the island too. He doesn't have quite the stamina that Alice does so he can only work 6 hours a day. He finds that he can gather a bundle of wood in 2 hours or 1 coconut per hour. What is his opportunity cost for 1 bundle of wood? What is the opportunity cost of 6 coconuts in terms of bundles of wood?

c) Who has the absolute advantage in the production of firewood and coconuts, respectively? (In this case, we will say a person has the absolute advantage in the production of a good if he or she produces more when devoting all available resources to the production of that good, so compare Alice spending all 8 of her hours on each with Bob spending all 6 of his hours.

Question 2

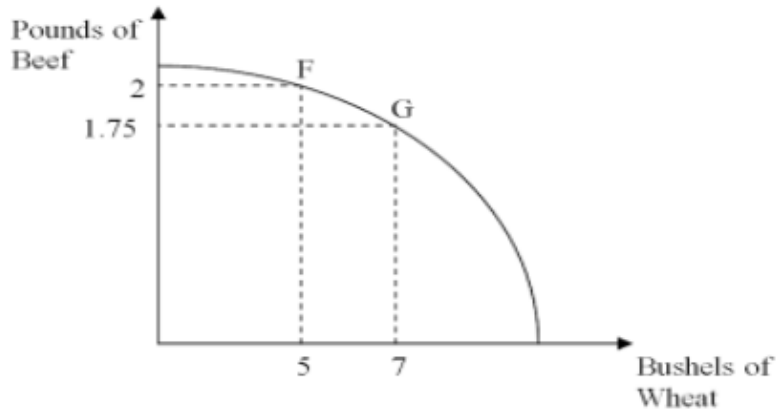


a) Which point(s) in this economy that produces wheat and rice production are the most efficient and why?
b) As the economy moves from point D to B to A, what happens to the opportunity cost of wheat?
c) Identify the point in the diagram which is unattainable and state the reason.
d) Identify the inefficient point(s) in the diagram and explain why.

Question 3

Use the figure below to answer the following question. Assume that the Canadian agricultural land is used either to raise cattle for beef or to grow wheat. The figure below represents the production possibility frontier for beef and wheat. Determine the opportunity cost of moving from

a) F to G
b) G to F



Comparative & Absolute Advantage

Multiple Choice Questions

1. The theory of ‘absolute advantage’

a. Best describes a situation where there are 2 countries, A and B, and potentially 2 goods which can be traded, X and Y. A is absolutely better at producing X and B is absolutely better at producing Y, and so if A specializes in producing X and B in Y, and they trade together, then both countries will gain.
b. Best describes the global strategy of businesses who always seek to gain an absolute advantage over their rivals.
c. Explains why developed countries have a competitive advantage over poorer countries
d. Best describes a situation where there are two countries, A and B, and potentially two goods can be traded, X and Y. If A was absolutely better at producing both X and Y compared to B, then there would be no advantage in A trading with B.

2. John can either build 6 models or prepare 4 experiments, Sam can either build 9 models or prepare 6 experiments. John and Sam have identical time and resources available.

a. John has absolute advantage in building models and Sam has an absolute advantage at preparing experiments.

b. Sam has an absolute advantage in building models and John has an absolute advantage at preparing experiments.
c. John has an absolute advantage in both goods
d. Sam has an absolute advantage in both building models and preparing experiments

3.

Unit labor requirement	Austria	Belgium
Steel	3	8
Brooms	2	1

Suppose that Austria and Belgium have the unit labor requirements for producing steels and brooms shown in the table above. Then,

a. Belgium has a comparative advantage in brooms
b. Austria has a comparative advantage in steels.
c. Austria has an absolute advantage in brooms.
d. Belgium has an absolute advantage in brooms.
e. All of the above.

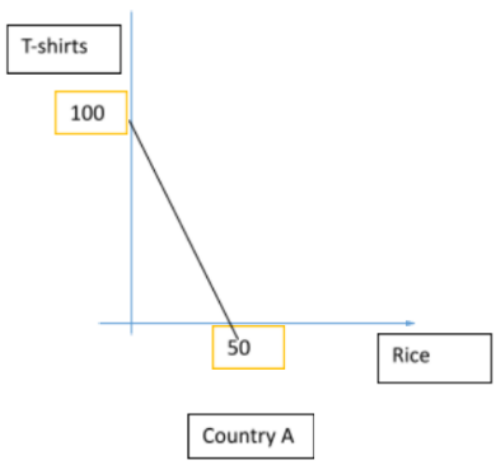
Short questions

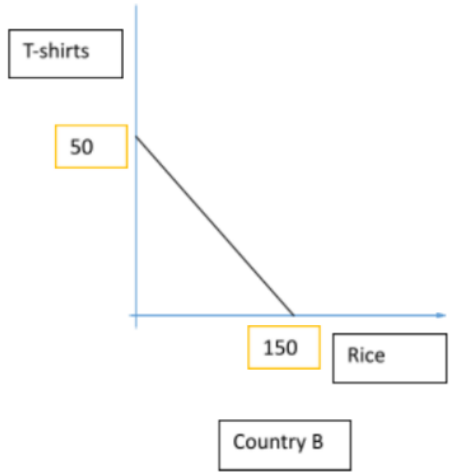
Question 1

In 30 minutes, Kana can either make miso soup or she can clean the kitchen. In 15 minutes, Mitchell can make miso soup; it takes Mitchell an hour to clean the kitchen. Fill in the blanks.

I. Mitchell has the absolute and comparative advantage at _____.
ii.Kana has the absolute and comparative advantage at _____.

Question 2





The graphs show two countries: Country A and Country B. Both countries produce T-shirts and Rice.
If country A utilizes all of its labor power and machine power in the production of T-shirts, it can produce 100 of them by sacrificing the production of 50 kilos of rice. Whereas if Country B utilizes all of its labor and machine power in T-shirt production, it is able to produce 50 of them while giving up 150 kilos of rice.

Strictly based on the comparative advantage theory, determine which country is the most efficient in rice production and which in T-shirt production. Should Country A specialize in rice production? Explain why or why not.

Question 3

Sarah and James are siblings. Their parents want 12 windows on the house washed and the 25 square yards of leaves raked. Sarah and James estimate their output as shown in the following table.

	Windows per hour	Square yards of leaves per hour
Sarah	4	6
James	3	5

a) Is Sarah going to specialize in raking leaves? Why or why not?
b) How long will Sarah and James take in doing the job if they specialize according to their comparative advantages?

Question 4

Labor Hours (for producing 1 unit)	Cars	Bike
Country A	10	5
Country B	8	2

Explain which country has a comparative advantage in producing cars and which country in producing bikes, showing the calculation of the opportunity cost for producing both the goods for each country.

Solutions

PPF

McQ answers

1 (b), 2 (a), 3 (d), 4 (c), 5 (b)

Short questions

Q1 Solution

(a) In the amount of time it takes to gather a bundle of firewood, Alice could have gathered (½)* 6 = 3 coconuts. Thus, the opportunity cost of one bundle of firewood is 3 coconuts. The opportunity cost of 12 coconuts is 4 bundles of firewood: Alice can gather 12 coconuts in 8 hours. If she were to gather firewood instead during these 8 hours then she would be able to gather 4 bundles of firewood: hence, when she chooses to gather 12 coconuts she is giving up 4 bundles of firewood.

(b) Each bundle of firewood takes as long as gathering 2 coconuts, so the opportunity cost of one bundle of firewood is 2 coconuts. The opportunity cost of 1 coconut is 1/2 bundle of firewood. So, for 6 coconuts, his opportunity cost is (½)* 6 = 3 bundles of firewood.

(c) Alice has absolute advantage in the production of both goods since she can out-gather Bob in both if she devotes all her time to one or the other. Bob has a comparative advantage in gathering firewood since each bundle of wood only costs him 2 coconuts compared to 3 for Alice. Alice then has comparative advantage in coconuts since she can gather 3 coconuts at a cost of 1 bundle of wood, but Bob can only gather 2 coconuts at a cost of 1 bundle of wood.

Q2 solution

a) A, B and D since these points lie on the PPF curve.
b) Opportunity cost is increasing
c) C as it lies outside the PPF curve which is not reachable with current resources and without an improvement in technology.
d) F and E since they are inside the PPF and the resources are not being fully employed.

Comparative & Absolute Advantage

McQ Answers

1 (a), 2 (d), 3 (e)

Short questions

Q1 Solution

(i) making miso soup

(ii) cleaning the kitchen