

ECO 181 Summer 2023 - Exam #01

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Q1 Assume that the US can be modeled using the simplest version of the circular-flow diagram. In this scenario, [households/firms/the government/the US] sell factors of production and [households/firms/the government/the US] purchase factors of production.

Q2 Before lean manufacturing innovations, Japan mostly sold consumer electronics to the US. Graph 1 illustrates Japan's PPF for automobiles and consumer electronics. Resources are specialized. However, Toyota's lean production techniques have been the most widely adopted, revolutionizing manufacturing worldwide. Lean manufacturing is designed to improve the productivity of automobiles.

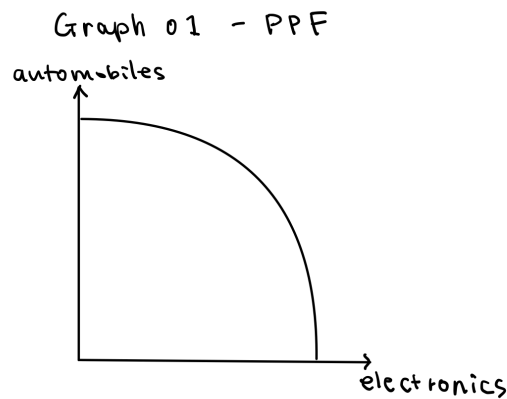


Figure 1: Graph 1

- a) Lean manufacturing causes the PPF to shift _____ (inward/ outward). Ideally, the PPF should shift more along the _____ (automobiles/ electronics) axis than the other axis.

- b) As a result of lean manufacturing, the opportunity cost of producing consumer electronics (in terms of automobiles) has _____ (risen,fallen). As a result, the opportunity cost of producing automobiles (in terms of electronics) has _____ (fallen/risen).

Q3 An increase in the price of a substitute will _____ demand. A decrease in the price of a complement will _____ demand.

- A. Increase; increase
- B. Increase; decrease
- C. Decrease; increase
- D. Decrease; decrease

Q4 Suppose that we have the following data on one week of production possibilities for Australia and New Zealand: Assume that both countries face constant opportunity costs.

	Coats	Bottles of Wine
Australia	15	20
New Zealand	20	5

- a. _____ [Australia/New Zealand] has absolute advantage in producing Bottles of Wine.
_____ [Australia/New Zealand] has absolute advantage in producing Coats.
- b. New Zealand's opportunity cost of one Bottle of Wine = _____ of a wool coat.
- c. _____ [Australia/New Zealand] has comparative advantage in producing Wine

Q5 You graduate and decide to start a new business. The product your business makes is an App for people to take notes on ipad, which is called Mynote. Consumers can pay a monthly subscription to get access to your app. Your position in the business is as Chief Financial Officer and part of your responsibilities are to predict changes in the supply and demand for Mynote.

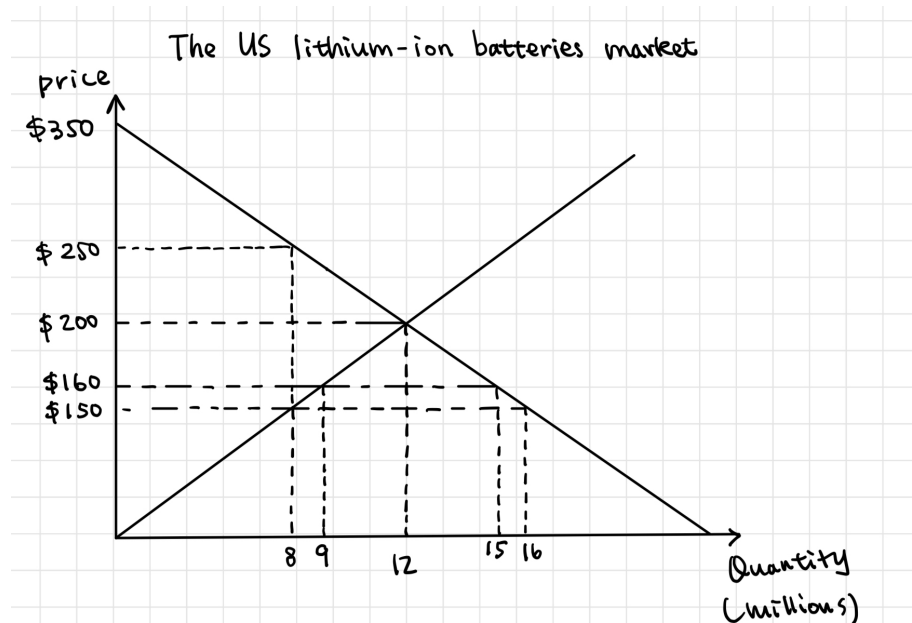
Please indicate the change in the supply and demand for Mynote, and the change in equilibrium price and equilibrium quantity.

- a. Congress passes a bill to subsidize Mynote by giving the business \$3 per subscription to partially cover production costs. 1) Supply _____ 2) Demand _____
- b. A booming economy results in higher incomes for consumers of Mynote, who consider their subscription a normal good. 1) Supply _____ 2) Demand _____
- c. Scenarios (a) and (b) occur simultaneously. 1) equilibrium quantity _____ 2) equilibrium price _____

Q6 Since 2019, the price of lithium in China has been falling (and it is predicted to continue falling through 2020). Assume nothing else is happening (the only thing changing is the

price). As the price falls, demand for lithium in China _____ [rises/falls/remains the same].

Q7 (The following graph describes the details of the US lithium-ion batteries market. Do not add the extra zeros for millions in your answer.)



- a. Assume in the closed economy (without trade), the US government decided to set the price ceiling on the lithium-ion batteries.
 - 1) If the price ceiling equals to \$150, the consumer surplus equals to \$_____ millions.
 - 2) If the price ceiling equals to \$150, the deadweight loss equals to \$ _____ million.
 - 3) If the price ceiling equals to \$250, the deadweight loss equals to \$ _____ million.
- b. Assume in the open economy, the US imports lithium-ion batteries from China and there is no government price control on the lithium-ion batteries market. Suppose that the world price of lithium-ion batteries is \$150.
 - 1) If the US were to move from autarky to free trade, the gains from trade equal \$_____ million.
 - 2) If the US were to move from autarky to free trade, the consumer surplus equals to \$_____ millions.
 - 3) If the US were to implement a \$10 tariff, the deadweight loss from this decision equals to \$_____ million.

4) If the US were to implement a \$10 tariff, the revenue that the US government earn equals to \$_____ million.

Q8 Indicate whether each of the following statements is an example of a normative or positive statement.

- a) The social security system is a good system and it deserves to be preserved as it is.
- b) A decrease in the minimum wage would decrease unemployment.
- c) The elimination of trade restrictions would increase an economy's standard of living.
- b) Following the most recent recession, the economy is recovering at a slower than usual pace.

Q9 Indicate whether each of the following statements is True or False.

- a) Scarcity means that there is less of a good or resource available than people wish to have.
- b) The opportunity cost of working one hour is the sum of the values you would have received from all other activities you could have done in that hour.
- c) Macroeconomics is the study of economy-wide phenomena.
- d) The sum of consumer and producer surplus measures the total benefits that buyers and sellers receive from participating in a market.

Q10 Use the table in page 6 to answer the following questions. Assume the base year is 2015.

- a) China's nominal GDP in 2019 = _____ trillion yuan
- b) China's GDP deflator in 2019 = _____ China's GDP deflator in 2015 _____
- c) China's inflation rate in 2019 (using the CPI) = _____
- d) The number of unemployed persons in China = _____ million, The growth rate of the Chinese population from 2018 to 2019 = _____ percent
- e) Final goods produced in Japan by Chinese firms _____ [are/are not] counted as part of China's GDP. Intermediate goods produced by Japan firms in China [are/are not] counted as part of China's GDP.

Q11 If a civilian adult without a job is waiting for a specific type of job to open up before applying, that individual is currently categorized as [employed/unemployed/not in the labor force/not in the adult, civilian, non-institutionalized population].

Q12 Over the past two decades, available jobs in the agricultural sector in Japan have been decreasing as the country transitions towards more service sector production. Unemployment in the agricultural sector that results from this is classified as

- a) Frictional unemployment.
- b) Structural unemployment.
- c) Cyclical unemployment.

Q13 The traditional view of the production process is that capital is subject to

- a) diminishing returns, so that other things the same, real GDP in poor countries should grow at a faster rate than in rich countries.
- b) diminishing returns, so that other things the same, real GDP in poor countries should grow at a slower rate than in rich countries.
- c) increasing returns, so that other things the same, real GDP in poor countries should grow at a faster rate than in rich countries.
- d) increasing returns, so that other things the same, real GDP in poor countries should grow at a slower rate than in rich countries.



2018 Population	1.5 billion (1,500 million)	
2019 Population	1.4 billion (1,400 million)	
2019 Labor Force	811 million	
2019 Unemployment Rate		3%
2019 Labor Force Participation Rate		68%
2019 Household Consumption (2019 yuan)	38 trillion	
2019 Government Spending (2019 yuan)	16 trillion	
2019 Investment (2019 yuan)	42 trillion	
2019 Exports (2019 yuan)	18 trillion	
2019 Imports (2019 yuan)	17 trillion	
2019 Transfer payments (2019 yuan)	2 trillion	
2019 Household Consumption (2015 yuan)	34 trillion	
2019 Government Spending (2015 yuan)	15 trillion	
2019 Investment (2015 yuan)	37 trillion	
2019 Exports (2015 yuan)	16 trillion	
2019 Imports (2015 yuan)	14 trillion	
2019 Transfer payments (2015 yuan)	1 trillion	
2019 CPI		125
2018 CPI		121