

REVIEW QUESTIONS (CHAPTERS 1-7)

1. What are theorems? What are precepts? If two economists agree on a theorem, do they necessarily agree on precepts? If two economists agree on a precept, do they necessarily agree on theorems?

Answer:

Theorems are propositions that are logically true based on the assumptions of a model. A precept is policy rule in favor of a particular course of action. With a theorem, an economist can explain how the world may work. With a precept, an economist turns that explanation into a recommendation for action. Because precepts are based on theorems combined with empirical evidence and the goals of society, two economists who agree on a theorem may not necessarily agree on the precept; they might disagree on whether the assumptions of the model hold (which could be tested empirically), or they might disagree on what the goals of society should be. Two economists might also arrive at the same precepts, but based on altogether different theorems, empirical evidence and goals.

2. Explain the differences between positive economics, normative economics, and the art of economics. Explain why you would categorize each of the following three statements as belonging to positive economics, normative economics, or the art of economics.
 - a. The unemployment rate is 6.5 percent.
 - b. The unemployment rate is unacceptably high.
 - c. If the government wants to reduce the unemployment rate, it should try cutting taxes.

Answer:

Positive economics is the study of what is, and how the economy works without regard to the goals of an economy. On the other hand, normative economics is the study of what the goals of the economy should be without regard to how the economy works. The art of economics applies what is known about how the economy works (positive economics) to achieve the goals of an economy (normative economics).

Statement (a) is an example of positive economics because it is a statement of fact and in theory it can be proven true or false. Statement (b) is an example of normative economics because the phrase, “unacceptably high,” implies a value judgment over which reasonable people could disagree. It cannot be proven true or false. Statement (c) is an example of art of economics, in which a policy option is offered to try to satisfy a goal. That option may or may not be a “good” one.

3. What is economics, and what are the three coordination problems an economy must solve?

Answer:

Economics is the study of how human beings coordinate their wants and desires, given the decision-making mechanisms, social customs, and political realities of the society. An economy must solve these three problems: What, and how much, to produce? How to produce it? For whom to produce it?

4. How are the three central economic questions—What, How, and For Whom—related to the concept of scarcity?

Answer:

Given that we have scarce resources and essentially unlimited wants, an economic system must make choices to prioritize wants by answering the *What* problem. In order to produce as much as possible from limited resources, the resources must be used efficiently. This is at least one of (and for economists, usually the most important) the criteria for solving the *How* problem. Since everyone can't have everything they want, the available goods must be allocated. That is, the *For Whom* problem must also be solved, and frequently is implicitly answered in large part by the answers to the *What* and *How* questions.

5. What is scarcity? Why is it so difficult to eliminate it?

Answer:

Scarcity refers to the problem in an economy wherein the goods available are too few to satisfy individual's desires. Scarcity is difficult to eliminate because new wants are constantly developing. As technology changes and more goods and services become available people decide that they need or want these new goods.

6. What is the “invisible hand”, and how does it work as a market force?

Answer:

The invisible hand is a phrase that refers to the price mechanism as a means for allocating resources. The key point is that it is the rise and fall of prices that guide our actions in a market. If there is a shortage in a market (quantity demanded exceeds quantity supplied), the invisible hand applies an upward pressure on the market price. Conversely, if there is a surplus, the invisible hand applies a downward pressure on the market price.

7. What is the difference between economic forces and market forces?

Answer:

Economic forces are the necessary reactions to scarcity. Any mechanism that performs a rationing function in order to deal with scarcity may be considered an economic force. A market force is one type of economic force. Specifically, a market force is an economic force that is given relatively free reign by society to work through the market.

8. What does the term efficiency mean?

Answer:

Efficiency means achieving a goal as cheaply as possible.

9. How does microeconomics differ from macroeconomics?

Answer:

Microeconomics involves an analysis of individual parts of an economy whereas macroeconomic analysis looks at the big picture, the economy as a whole.

Microeconomics is the study of individual choice, and how choice is influenced by economic forces. Macroeconomics is the study of the economy as a whole, which includes inflation, unemployment, business cycles and growth.

10. What is an economic institution? Why is it important? Describe three economic institutions that regularly impact our daily lives.

Answer:

An economic institution is any structural aspect of an economy that influences the outcome of economic decisions. Such things as corporations, governments and cultural norms are all economic institutions. Economic institutions are important because the predictions of economic theory often need to be adjusted to include the impact of economic institutions in order to more accurately explain real world economic events. Examples of economic institutions are endless, but some obvious ones include money, credit, advertising, telemarketing, shopping malls, mail order, etc.

11. Why do opportunity costs increase as you produce more of a specific good?

Answer:

Opportunity costs increase because not all resources are equally well suited for use in the production of all goods. For example, wood is a better resource for the production of pianos than of cars. In the production of any specific good, as the most suitable resources get used up and less suitable resources are used, the opportunity cost increases.

12. Under what assumption(s) is the production possibilities curve a representation of efficiency points?

Answer:

Points of a PPC are efficient points under the assumption that more is better, which allows us to state that efficiency equals productive efficiency.

13. Does the production possibilities curve tell us if goods are distributed efficiently in a society? Explain.

Answer:

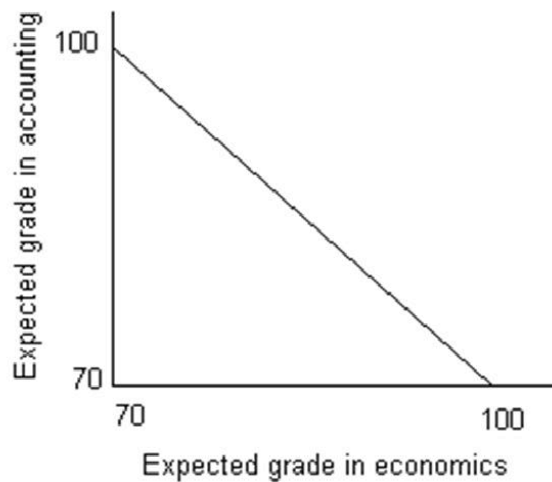
No. The production possibilities curve only show productive efficiency—the production of the most amount of output with a given amount of resources. The production possibilities curve does not answer the questions of who gets what or what the society should produce.

14. Draw a production possibilities curve that indicates how you might divide up 10 hours of study time between your economics and accounting midterm exams. Put expected grade in economics on the horizontal axis and expected grade in accounting on the vertical axis. If you don't study at all, you expect to make a 70 on both exams. For every one additional hour of studying economics, your exam grade rises by 3 points. The same is true for accounting.

- What is the opportunity cost of studying one extra hour for your economics exam?
- What is the opportunity cost of studying one extra hour for your accounting exam?
- Can the production possibility curve shift? Explain.

Answer:

The diagram below



If you allocate all available studying time for economics, you will make a 100 on the test ($70 + 3 \text{ times } 10$). Similarly, if you don't study economics and allocate all your time to accounting, you will make a 100 on the accounting exam. Therefore, the shape of the production possibilities curve is as shown above.

- The opportunity cost of one hour of studying economics is one hour of studying accounting, which means the loss of 3 points on the accounting exam.
- The opportunity cost of one hour of studying accounting is one hour of studying economics, which means the loss of 3 points on the economics exam.
- Yes, the production possibilities curve may shift. If you allocate more time to studying or if you developed a method that would make your studying time more productive, the curve will shift in such a way that it might be possible to get 100 in both courses. In this case, it would not be a parallel shift.

15. How does the factor market differ from the goods market?

Answer:

In the factor market, households supply all factors of production to business, and that includes labor, land, capital, and managerial skills. In the goods market, business supply finished goods and services to households.

16. Stuffed-Crust Pizza is a new pizza introduced by Pizza Hut. What happens to the equilibrium price and equilibrium quantity of Stuffed-Crust Pizza in each of the following situations?

- Due to weather conditions, the output of wheat decreased and the price of wheat flour increased.
- The price of cola (complement good with pizza) decreased.
- Domino's Pizza introduced a similar pizza that sold for \$1 less than the one sold by Pizza Hut.
- A recession reduced households' income.

- e. A new oven technology reduced the time it takes to bake a pizza.

Answer:

- a. A reduction in the supply of wheat raises its price. Since the cost of producing a unit of pizza rises, the supply curve for pizza shifts to the left, the equilibrium price rises, and the equilibrium quantity decreases.
- b. For many people, cola and pizza are complementary goods. A decrease in the price of cola increases the quantity of cola demanded, and shifts the demand curve for pizza to the right. As a result, the equilibrium price of pizza rises, as does the equilibrium quantity.
- c. If households think of the two brands of pizza as substitutes, the quantity demanded for Domino's pizza rises and this decreases the demand for Pizza Hut's pizza, which lowers its equilibrium price and equilibrium quantity.
- d. Stuffed-Crust Pizza is a normal good, a reduction in consumers' income lowers the demand, which decreases both the equilibrium price and the equilibrium quantity of pizza. (The exact opposite would happen if Stuffed-Crust Pizza were an inferior good.)
- e. The new technology lowers the cost of producing a unit of pizza. The supply curve shifts to the right, the equilibrium quantity rises, and the equilibrium price decreases.

17. What are the “other things constant” when drawing a demand curve? What are the “other things constant” when drawing a supply curve?

Answer:

In the case of the demand curve, the list of “other things constant” refers to anything (other than price) that influences a person's decision to buy something. The text lists four important “other things”: 1) society's income; 2) the prices of other goods; 3) taxes; and 4) expectations.

18. In the case of the supply curve, the list of “other things constant” refers to anything (other than price) that influences a firm's decision to sell something. The text lists four important “other things”: 1) price of inputs; 2) technology; 3) expectations; and 4) taxes and subsidies.

19. What are normal goods? What are inferior goods? Give an example of each type.

Answer:

A normal good is a good whose demand varies positively with income, whereas an inferior good is a good whose demand varies inversely with income. Examples of a normal good could include lobster, Caribbean cruises, and luxury cars. Examples of an inferior good could include second-hand clothing, macaroni and used cars.

20. Consider the supply and demand schedules below to answer the questions that follow:

<u>Price</u>	<u>Qty.</u> <u>Demanded</u>	<u>Qty.</u> <u>Supplied</u>
\$ 10	0	10
9	1	9
8	2	8
7	3	7
6	4	6
5	5	5
4	6	4
3	7	3
2	8	2
1	9	1

- In a free market, what will the equilibrium price be?
- What will the equilibrium quantity demanded and quantity supplied be?
- If price were \$2, what would happen? (Discuss in terms of adjustment to equilibrium.)
- If price were \$7, what would happen? (Discuss in terms of adjustment to equilibrium.)
- If price were \$5, what would happen? (Discuss in terms of adjustment to equilibrium.)

Answer:

- \$5.00, where quantity demanded equals quantity supplied.
- 5 of each.
- At a price of \$2, below equilibrium, quantity demanded would exceed quantity supplied. There would be a shortage and suppliers would raise their prices to eliminate the shortage. The price would rise until quantity supplied equaled quantity demanded at \$5.
- At a price of \$7, above equilibrium, quantity supplied would exceed quantity demanded. There would be a surplus and suppliers would lower their prices to eliminate the surplus. The price would decline until quantity supplied equaled quantity demanded at \$5.
- At a price of \$5, quantity supplied equals quantity demanded. Price would not change since quantity supplied equals quantity demanded at \$5.

21. Explain the shifts in demand and/or supply that can result in the following observations: (Assume the demand curve is downward sloping and the supply curve is upward sloping.)

- Both price and quantity rise.
- Price rises, quantity falls.
- Price rises, quantity doesn't change.
- Quantity rises, price doesn't change.

Answer:

- This will result from an increase in demand.
- This will result from a decrease in supply.
- This will result from an increase in demand and a decrease in supply, where the curves shift by the same proportion.

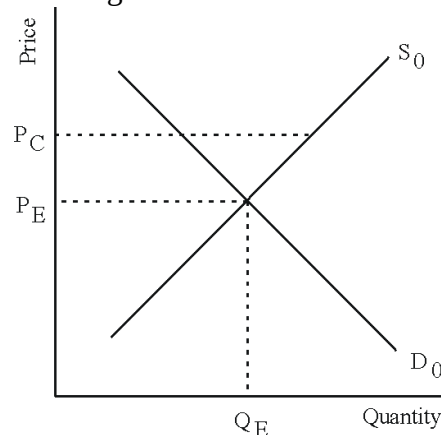
- d. This will result from an increase in demand and an increase in supply, where the curves shift by the same proportion.

22. Use a supply/demand diagram to explain the effects of a government-imposed price ceiling that is above the equilibrium price. What will be the effective quantity and price in this situation?

Answer:

The equilibrium quantity will be the market-determined quantity since the price ceiling is above equilibrium price. It is ineffective. Market forces will result in a price of P_E and quantity of Q_E . Since $P_E < P_C$ the market outcome is not altered by the government imposed price ceiling.

The diagram:



23. What is the difference between elastic and inelastic demand and supply?

Answer:

The difference relates to whether the percentage change in quantity is larger or smaller than the percentage change in price. Specifically:

Demand or supply is elastic if the percentage change in quantity is greater than the percentage change in price.

Demand or supply is inelastic if the percentage change in quantity is less than the percentage change in price.

24. What is the key factor in determining how elastic or inelastic a demand curve will be? Explain.

Answer:

The key factor in determining how elastic or inelastic a demand curve will be is substitution. The more goods are available as substitutes the more sensitive to changes in price buyers will be, and the more elastic the demand curve. If there are few substitutes available, buyers will be less sensitive to changes in price and demand will be inelastic.

25. If two goods have a cross-price elasticity value of +3, are they substitutes or complements?

Answer:

When a cross-price elasticity is positive it means that an increase in the price of one good will cause an increase in the demand for another good. This indicates that the two goods are substitutes.

26. Suppose that the price elasticity of demand is 6. If price rises by 10% how much will quantity demanded fall?

Answer:

A price elasticity of demand of 6 means that for every one percent increase in price the quantity demanded will fall by 6%. Since here price rises by 10%, quantity demanded will fall by 60%.

27. Suppose that the price elasticity of supply is 0.5. If price falls by 10% how much will quantity supplied fall?

Answer:

A price elasticity of supply of 0.5 means that for every one percent fall in price the quantity supplied will fall by 1/2%. Since here price falls by 10%, quantity supplied will fall by 5%.

28. Bill's Homemade Pizza recently increased the price of its super jumbo size pepperoni pizza by 12%. As a result of this price increase the quantity demanded for this type of pizza decreased by 3%. What is the price elasticity of demand for Bill's super jumbo size pepperoni pizza?

Answer:

$$E = 3/12 = .25$$

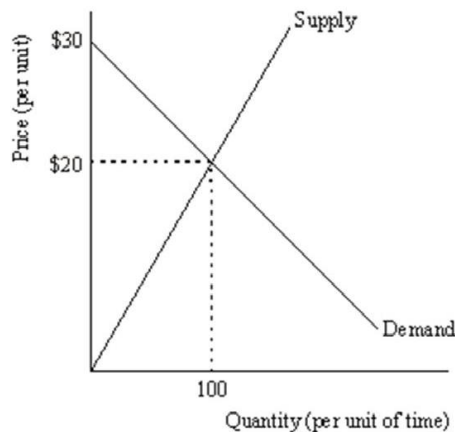
29. Define consumer surplus and producer surplus. Explain why the equilibrium price and quantity maximizes the sum of producer plus consumer surplus (the total surplus).

Answer:

Consumer surplus is the value the consumer gets from buying a product less its price.

Producer surplus is the price the producer sells a product for less the cost of producing it. At the equilibrium price all trades that add a net surplus are made. If quantity is limited to less than the equilibrium quantity or if prices are fixed at a level that reduces the equilibrium quantity, some potential trades that would otherwise have added a net surplus will not be made.

30. Use the diagram below to compute the dollar value of the consumer and producer surplus.



Answer:

Consumer surplus = $\frac{1}{2} \times 100 \times \$10 = \$500$; producer surplus = $\frac{1}{2} \times 100 \times \$20 = \$1,000$.

31. The elasticity of demand for sunscreen is 0.8 and the elasticity of supply is 2.2. Suppose that the demand for sunscreen increased by 10% during an unseasonably hot month. Calculate the percentage change in the equilibrium price of sunscreen.

Answer:

Applying the formula:

Percentage change on price = (percentage change in demand)/(ED + ES) = $0.1/3 = 3.3\%$. The equilibrium price of sunscreen will increase by 3.3% as a result of a 10% increase in demand.

32. The elasticity of demand for fitbits is 3 and the elasticity of supply is 1.5. Suppose that a breakthrough in the technology used in the production of fitbits increased the supply of fitbits by 20%. Calculate the percentage change in the equilibrium price of fitbits.

Answer:

Applying the formula:

Percentage change on price = (percentage change in supply)/(ED + ES) = $0.2/4.5 = 4.4\%$. The equilibrium price of fitbits will decrease by 4.4% as a result of a 20% increase in supply.

33. Suppose the price elasticity of demand is 1.5 and the price elasticity of supply is 0.5, what is the percentage of a tax borne by the consumer, and what is the percentage of the same tax borne by the producer?

Answer:

The percentage of the tax borne by the consumer is the price elasticity of supply divided by the sum of the price elasticities of demand and supply. This means that the consumer pays $0.5/(1.5+0.5) = 25\%$ of the tax. The producer's share of the tax is the remaining 75%, or the price elasticity of demand divided by the sum of the price elasticities of demand and supply.

34. Suppose the current equilibrium price of a good is \$10, the elasticity of demand is 0, and the elasticity of supply is 2. If the government levies a \$1 tax on the supplier, calculate the new equilibrium price and the percentage of the tax borne by both the demander and the supplier of the good.

Answer:

Note that demand is perfectly inelastic in this case (the demand curve is vertical). The price rises by the entire amount of the tax to \$11. The percentage of the tax borne by the consumer is the price elasticity of supply divided by the sum of the price elasticities of demand and supply. That is, the consumer's share of the tax is $2/(0+2) = 100\%$ of the tax. The producer's share in this case is the price elasticity of demand divided by the sum of the price elasticities of demand and supply, which equals 0% ($0/0+2$).