

Student: _____
Date: _____

Instructor: Ufuk Tutan
Course: BUS211 - Microeconomics (2020 Spring)

Assignment: Preparation Test

1. A university decides to change its late-night bus service between the campus and student housing from a fare-based service to a free service.

This statement means that the incentive to ride the bus _____.

The university's decision is a _____ decision.

- ☐ A. remains the same; macroeconomic
- ☐ B. changes; macroeconomic
- ☒ C. **changes; microeconomic**
- ☐ D. remains the same; microeconomic

2. _____ is an example of _____.

- ☐ A. Ben Cohen of Ben and Jerry's Ice Cream; labor
- ☐ B. An auto worker; capital
- ☐ C. An assembly line at Ford; entrepreneurship
- ☒ D. **Niagara Falls; land**

3. Resource use is efficient when _____.

- ☐ A. retail stores sell goods and services at a price that results in them just covering their costs
- ☐ B. everyone who wants a job has a job
- ☒ C. **a situation cannot be improved upon**
- ☐ D. shortages do not occur

4. A choice on the **margin** is a choice that is made by comparing all the relevant _____ systematically and _____.

Marginal cost is the _____ that arises from one unit _____ in an activity.

Marginal benefit is the _____ that arises from one unit _____ in an activity.

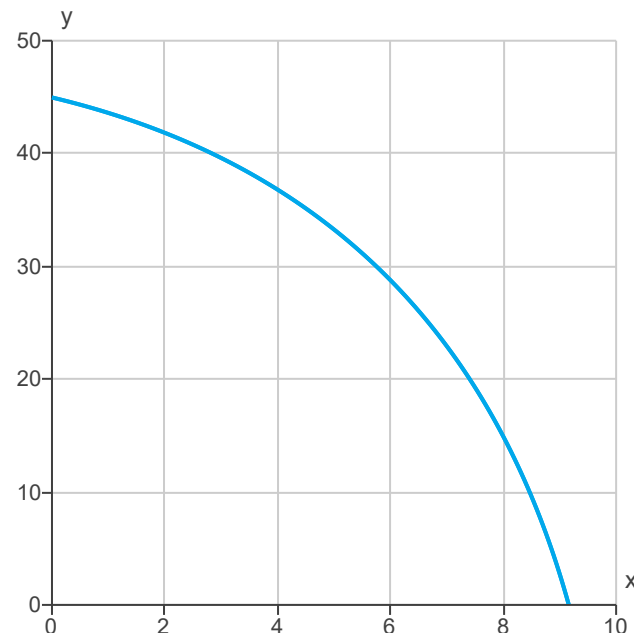
- ☒ A. alternatives; incrementally;
opportunity cost; increase;
benefit; increase
 - ☐ B. profits; totally;
total cost; increase;
opportunity cost; decrease
 - ☐ C. prices; incrementally;
opportunity cost; decrease;
revenue; increase
 - ☐ D. costs; incrementally;
total cost; decrease;
benefit; decrease
-

5. An **economic model** is a description of some features of the economic world that includes _____ features assumed necessary to explain the _____ facts.

- ☒ A. only those; observed
 - ☐ B. only those; unobserved
 - ☐ C. all the; unobserved
 - ☐ D. all the; observed
-

6. The graph shows _____.

- ☐ A. an inverse linear relationship
- ☒ B. a negative relationship becoming steeper
- ☐ C. a negative relationship becoming less steep
- ☐ D. a relationship that is positive because as the value of x increases, the value of y decreases by larger and larger amounts



7. **Kong Tops the Box Office**

Movie	Theaters (number)	Revenue (dollars per theater)
A <i>Kong: Skull Island</i>	3,846	\$15,867
B <i>Logan</i>	4,071	\$9,362
C <i>Get Out</i>	3,143	\$6,600
D <i>The Shack</i>	2,888	\$3,465

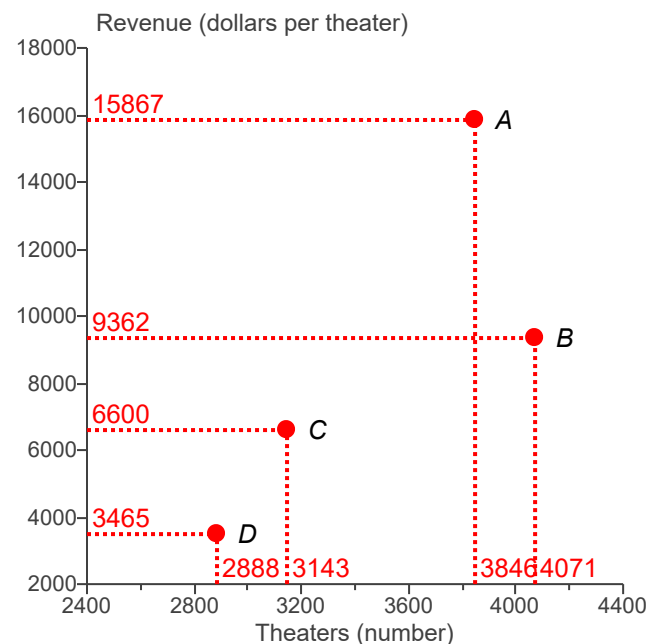
Source: boxofficemojo,
Data for weekend of February 14-17, 2014

The graph shows a scatter diagram of the data in the table.
Calculate the slope of the relationship between 3,846 and 4,071 theaters.

The slope of the relationship between 3,846 and 4,071 theaters is
-28.91 dollars per theater.

>>> Answer to 1 decimal place.

>>> If your answer is negative, include a minus sign. If your answer is positive, do not include a plus sign.



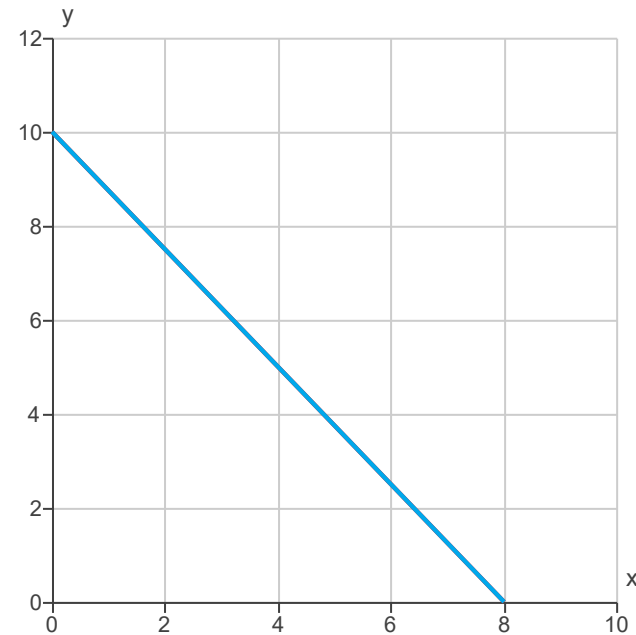
8. The line in the graph shows a relationship between two variables, x and y .

What is the slope of this relationship?

The slope of this relationship is - 1.25 .

>>> Answer to 2 decimal places.

>>> If the slope is negative, use a minus sign. If the slope is positive, do not use a plus sign.



9. The figure shows a relationship between two variables, x and y .

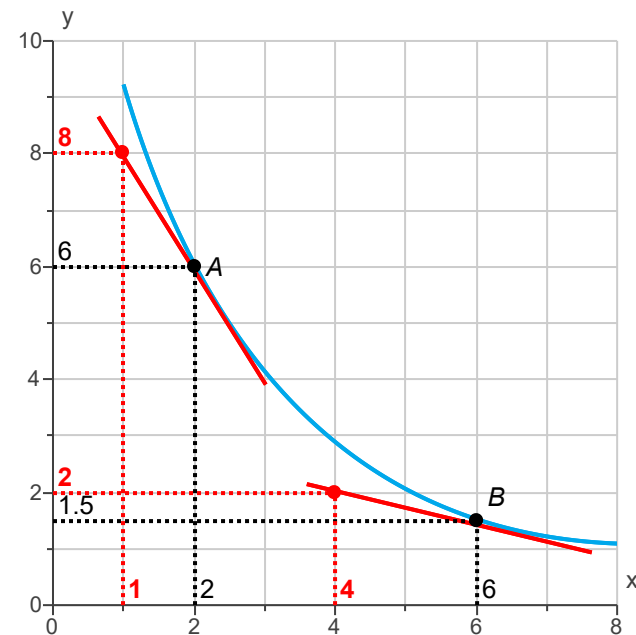
Calculate the slope of this relationship at points A and B .

The slope of the relationship at point A is - 2 .

The slope of the relationship at point B is - .25 .

>>> Answer to 2 decimal places.

>>> If the slope is negative, use a minus sign. If the slope is positive, do not use a plus sign.

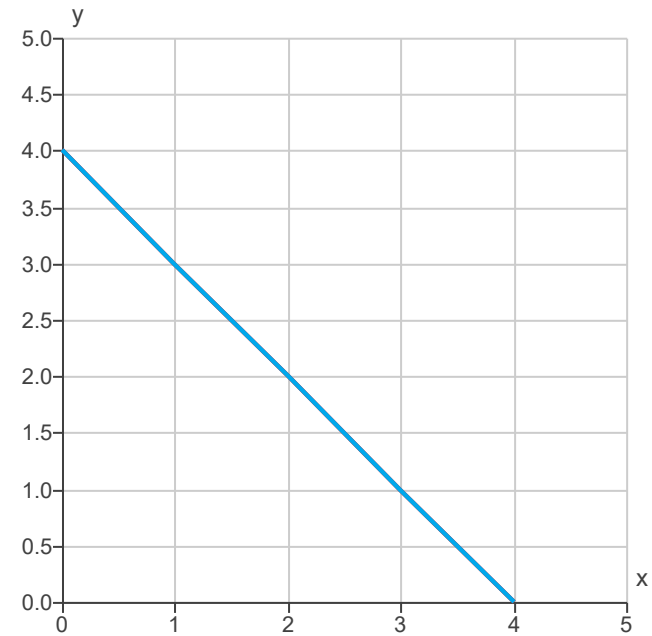


10. The line in the graph shows a relationship between two variables, x and y .

What is the slope of this relationship?

The slope of this relationship is -1 .

>>> If the slope is negative, use a minus sign. If the slope is positive, do not use a plus sign.



11. ¹ Click on the icon to study the *Economics in the News*. Then answer the following questions.

1. Robots _____.

- ☐ A. have an undetermined effect on U.S. production possibilities
- ☐ B. have no effect on U.S. production possibilities
- ☒ C. **make U.S. workers more productive and increase U.S. production possibilities**
- ☐ D. take jobs away from U.S. workers and decreases U.S. production possibilities

2. Advances in technologies for producing services _____.

- ☒ A. **increase U.S. production possibilities**
- ☐ B. decrease U.S. production possibilities
- ☐ C. have an undetermined effect on U.S. production possibilities
- ☐ D. have no effect on U.S. production possibilities

3. Assume that the U.S. *PPF* measures steel production on the x-axis and production of services on the y-axis. If robots are the only technological advance, _____.

- ☐ A. the U.S. *PPF* does not change
- ☐ B. the U.S. *PPF* shifts outward, increasing the x-axis intercept and the y-axis intercept
- ☐ C. the U.S. *PPF* rotates outward, increasing the y-axis intercept with no change in the x-axis intercept
- ☒ D. **the U.S. *PPF* rotates outward, increasing the x-axis intercept with no change in the y-axis intercept**

4. If robots had been the only technological advance, the opportunity cost of producing steel would have been _____.

- ☐ A. equal to the opportunity cost of producing services
- ☐ B. the same as it actually was
- ☒ C. **lower than it actually was**
- ☐ D. higher than it actually was

1: Reference

Production Possibilities in the Rust Belt

Can President Trump Rescue the Rust Belt?

The Week

March 18, 2017

President Trump promised to reverse the decades-long decline of manufacturing jobs. Can it be done? ...

... The region, which stretches from western New York to Pennsylvania, Ohio, Michigan, Indiana, Illinois, and Wisconsin, has been in serious decline since 1979—the year that U.S. manufacturing employment peaked. Over the past four decades, manufacturing jobs have plunged by 7 million as factories have downsized, closed, and outsourced work to low-wage countries such as Mexico and China. ...

Trump already claims credit for pressuring several companies, including Carrier, to keep or create jobs in the U.S. ... in exchange for various economic incentives. [And he] has floated the possibility of tariffs and import taxes of 20 to 35 percent on products made in Mexico, China, and other countries. ...

Will these policies work? Few economists think so: ... About 85 percent of the 5 million factory jobs lost between 2000 and 2010 can be blamed on technology and robots, according to a Ball State University study. That's why virtually all economists agree that bringing back millions of lost jobs is unlikely. ...

So, are Rust Belt workers doomed? Not necessarily. But economists agree they do need to be retrained for the new manufacturing age, which requires workers who can program and operate computers and robots. The U.S. will need to fill 3.5 million skilled jobs in specialized manufacturing over the next decade, according to a 2016 White House report. ...

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MyLab Economics Economics in the News

ESSENCE OF THE STORY

- The Rust Belt is hurting because manufacturing jobs have fallen by 7 million since 1979.
- President Trump proposes economic incentives to keep or create jobs in the United States and taxes on imports from Mexico and China.
- Few economists think these policies will work because most of the factory jobs lost resulted from new technology and robots.
- Economists say that Rust Belt workers need to be retrained to operate new technologies.

ECONOMIC ANALYSIS

- Why has the Rust Belt lost jobs, and will rest bring them back?
- To answer these questions, we'll look at one product: steel.
- In 1974, 521,000 workers produced 130 million tons of steel, and in 2016, 151,000 workers produced 110 million tons.
- So, one reason why steel jobs were lost is that production fell. But production fell by 38 percent while the number of workers fell by 71 percent.
- A bigger reason why steel jobs were lost is that technology has made steel workers more productive.
- In 1974, one worker could produce 250 tons of steel per year. In 2016, equipped with robots, one worker could produce 530 tons per year.
- We can illustrate what has happened in the Rust Belt by making a graph of the PPF, with steel on the x-axis and services on the y-axis.
- Figure 1 shows the PPF for 1974 and for 2016. The points on the PPFs at which the U.S. produced steel and services are labeled.
- When production possibilities expanded, the production of services increased and the production of steel decreased.
- Did steel imports cause the decrease in steel production?
- Figure 2 explains why we import some steel.
- We could produce the 110 million tons of steel that we consume, but we can get steel at a lower opportunity cost by importing it.
- Recall that the slope of the PPF measures the opportunity cost of producing steel. The slope of the PPF at point A, the production point in 2016, measures the opportunity cost of producing steel in 2016.
- If our production of steel is efficient, we produce the quantity at which the opportunity cost equals the world price of buying it from other countries.
- The red "Trade line" in Fig. 2 (like the trade line for Joe in Fig. 2.6) shows our import possibilities.
- By importing 30 million tons per year, we can consume 110 million tons at point B outside our PPF.
- The opportunity cost of producing more steel in the United States is greater than the opportunity cost of steel in the world, so it is efficient to limit our production and import steel.

12. ² Click on the icon to study the *Economics in the News*. Then answer the following question.

If robots had been the only technological advance, the opportunity cost of producing steel would have been _____.

- ☒ **A. lower than it actually was**
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- Figure 1 shows the PPF for 1974 and for 2016. The points on the PPFs at which the U.S. exports and imports steel are marked.
- When production possibilities expanded, the quantity of services increased and the production of steel decreased.
- Did steel imports cause the decrease in steel production?
- Figure 2 explains why we import some steel.
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- Recall that the slope of the PPF measures the opportunity cost of producing one good in terms of the other. The slope of the PPF at point A, the production point in 2016, measures the opportunity cost of producing one ton of steel in 2016.
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13. ³ Click on the icon to read the news article. Then answer the following questions.

An Act of the United States Congress increased U.S. production of corn by mandating a _____.

As the production of corn increases, the opportunity cost of corn _____.

- ☐ A. decrease in the use of ethanol and an increase in the quantity of corn produced as food; decreases because of the principle of decreasing marginal cost
- ☒ B. **steady increase in the production of ethanol; increases because resources are not equally productive in all activities**
- ☐ C. decrease in the use of ethanol and an increase in the quantity of corn produced as food; increases because resources are not equally productive in all activities
- ☐ D. steady increase in the production of ethanol; decreases because opportunity cost is a ratio

In the rest of the world, a movement along the *PPF* occurred due to _____ in the quantity of land devoted to producing corn. The *PPF* also shifted _____ due to drought, which increased the cost of producing corn.

- ☐ A. a decrease; inward
- ☐ B. a decrease; outward
- ☐ C. an increase; outward
- ☒ D. **an increase; inward**

The United States achieves allocative efficiency in corn production if its marginal benefit _____ marginal cost.

- ☐ A. is greater than
- ☒ B. **equals**
- ☐ C. is less than or equal to
- ☐ D. is greater than or equal to

3: Reference

The Rising Opportunity Cost of Food

US Farmers' Corn Drive Set to Curtail Land for Soybeans

Financial Times

March 31, 2012

Food commodity prices were sent gyrating after U.S. farmers signaled plans to sow the most corn in 75 years, leaving less land for soybeans, which are facing a fall in supplies due to droughts in South America.

A U.S. government survey of 84,500 farm operators indicated they would plant 95.9m acres (38.4m hectares) with corn this spring, 4 percent more than last year, the most since 1937 and above expectations. Plantings of soybeans, often rotated with corn, would fall 1 percent from last year to 73.9m acres (29.6m hectares), with declines in such fertile states as Iowa, Missouri, and Nebraska.

The U.S. is the world's leading exporter of corn and vies with Brazil in soybean exports, so decisions made there are vital to global food markets. A growing world population and rising incomes in emerging economies have driven greater appetites for the crops, used in products from pig feed to vegetable oil. ...

"This is the annus horribilis for South American grain production. La Niña hit all the wrong places. ..." said Nick Higgins, commodity analyst at Rabobank, the Dutch bank that is one of the biggest lenders to the agribusiness industry. ...

Corn peaked at a record of almost \$8 a bushel last June as growers sought to meet demand from livestock producers and the US ethanol industry. If farmers follow through with planting intentions and yields are good, this year's crop could break records, helping ease concerns about food prices. ...

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15. A **competitive market** is a market that has _____, so _____ can influence the price.

- ☐ A. many buyers and one seller; no buyer
- ☐ B. one buyer and many sellers; no seller
- ☐ C. many buyers and sellers; both buyers and sellers
- ☒ D. many buyers and sellers; no single buyer or seller

16. What are the influences on buying plans that change demand, and do these influences increase or decrease demand?

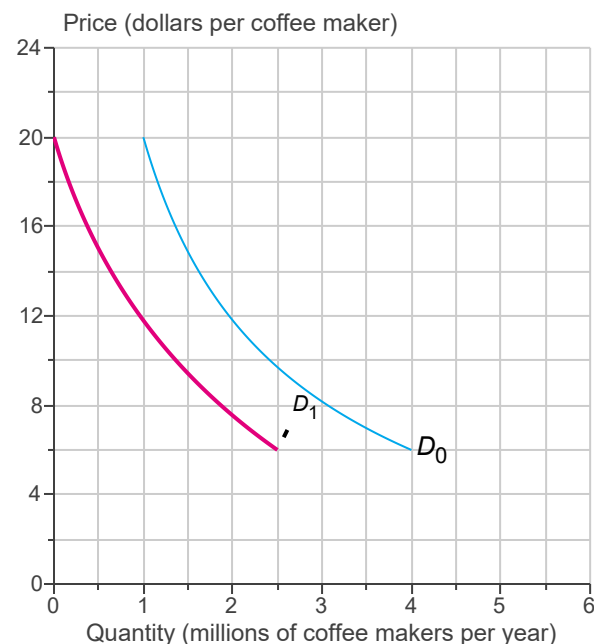
Complete the following question about a change in demand.

The graph shows a demand curve for coffee makers.

Draw a demand curve that shows what happens in the market for coffee makers if incomes decrease and a coffee maker is a normal good, but all other influences on buying plans remain the same. Label the curve D_1 .

When an event occurs that changes the demand for coffee makers, _____ if demand increases and _____ if demand decreases.

- ☐ A. a movement up along the demand curve occurs; a movement down along the demand curve occurs
- ☐ B. the demand curve shifts leftward; the demand curve shifts rightward
- ☒ C. the demand curve shifts rightward; the demand curve shifts leftward
- ☐ D. a movement down along the demand curve occurs; a movement up along the demand curve occurs



>>> Draw only the objects specified in the question.

17. Why does demand not change when the price of a good changes with no change in the other influences on buying plans?

Consider the demand for hot dogs.

The demand for hot dogs does not change when a change in _____ occurs.

- ☐ A. the population
- ☐ B. the expected future price of a hot dog
- ☐ C. the price of ketchup (ketchup is a complement of a hot dog)
- ☒ D. the price of a hot dog

An increase in the price of a hot dog _____.

- ☒ A. decreases the quantity of hot dogs demanded and results in a movement up along the demand curve for a hot dog
- ☐ B. increases the demand for hot dogs and shifts the demand curve for a hot dog rightward
- ☐ C. decreases the demand for hot dogs and shifts the demand curve for a hot dog leftward
- ☐ D. increases the quantity of hot dogs demanded and results in a movement down along the demand curve for a hot dog

18. In January 2010, the price of gasoline was \$2.70 a gallon. By spring 2010, the price had increased to \$3.00 a gallon.

Assume that there were no changes in average income, population, or any other influence on buying plans.

Explain how the rise in the price of gasoline would affect

- a. The demand for gasoline.
- b. The quantity of gasoline demanded.

Given the law of demand, you would expect the rise in the price of gasoline to _____ the quantity of gasoline demanded and _____ the demand for gasoline.

- ☐ A. increase; decrease
- ☐ B. decrease; decrease
- ☐ C. not change; decrease
- ☒ D. decrease; not change

19. **Demand** is _____, when all other influences on buying plans remain the same.

- ☐ A. the relationship between the quantity demanded of a good and income
- ☐ B. the quantity of a good that people plan to buy
- ☐ C. the is the quantity of a good that people want but can't afford
- ☒ D. **the relationship between the quantity demanded of a good and the price of the good**

20. The figure shows the demand curve for printers.

Complete the following sentences.

If the price of a printer rises from \$20 to \$40, while all other influences on buying plans are unchanged, the quantity of printers demanded _____.

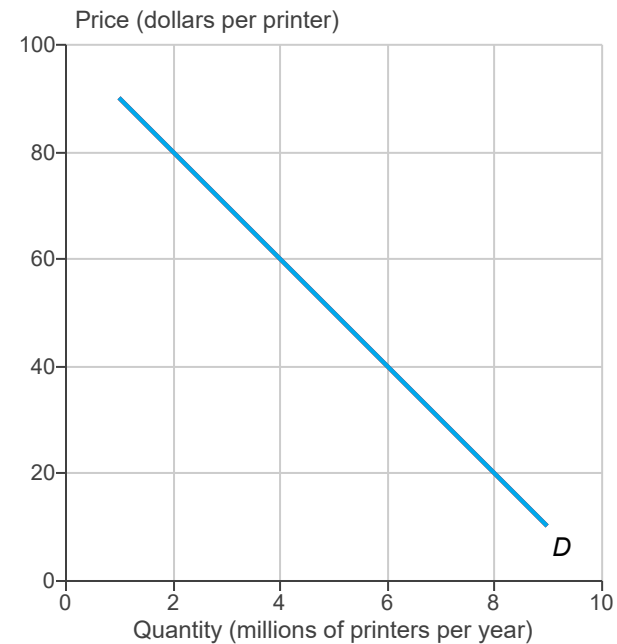
- ☐ A. does not change
- ☒ B. **decreases**
- ☐ C. increases

If the price of a printer rises from \$20 to \$40, while all other influences on buying plans are unchanged, the quantity of printers demanded changes from _____ to _____.

- ☐ A. 6 million; 4 million
- ☐ B. 6 million; 8 million
- ☐ C. 4 million; 6 million
- ☒ D. **8 million; 6 million**

The change in the price of a printer illustrates the law of demand in action.

- ☒ A. **True**
- ☐ B. False



21. The figure shows the demand curve for sundaes.

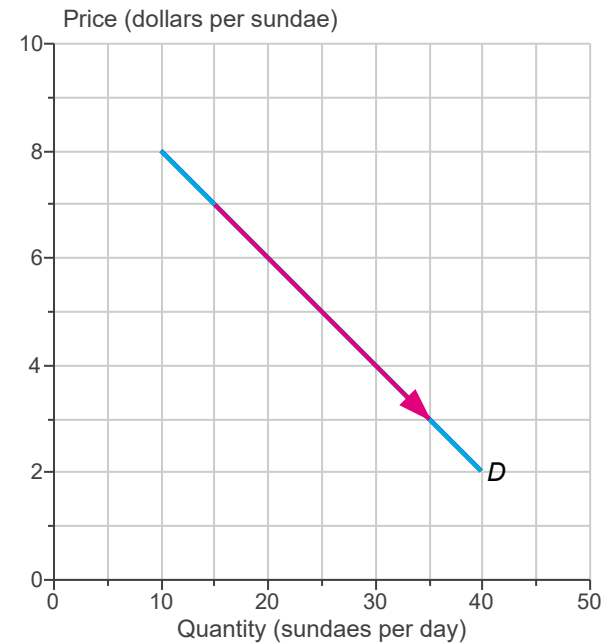
Suppose that the price of a sundae falls but all other influences on buyers' plans remain the same.

Show the effect in the graph. Draw *either* an arrow on the demand curve showing the direction of change *or* a new demand curve.

If the price of a sundae falls, a _____ the demand curve occurs.

If any factor that influences buying plans other than the price changes, then a _____ the demand curve occurs.

- ☐ A. leftward shift of; movement up along
- ☐ B. movement up along; shift of
- ☒ C. **movement down along; shift of**
- ☐ D. rightward shift of; movement down along



>>> Draw only the objects specified in the question.

22. Hot dogs and burgers are substitutes.

If the price of a hot dog increases, how does the demand for burgers change?

If the price of a hot dog increases, the demand for burgers will _____.

- ☐ A. decrease, and the demand curve for burgers will shift leftward
- ☒ B. **increase, and the demand curve for burgers will shift rightward**
- ☐ C. increase or decrease, but the demand for hot dogs will not change
- ☐ D. not change, but there will be a movement along the demand curve for burgers

23. What happens to the quantity of smartphones supplied and the supply of smartphones if the price of a smartphone rises?

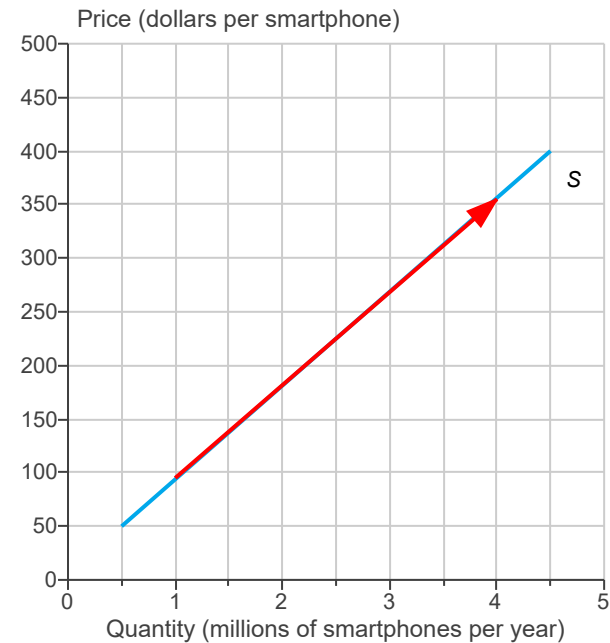
Draw a supply curve of smartphones. Label it.

Use any prices and quantities you wish but make your supply curve obey the law of supply.

Then draw an arrow to indicate what happens to the quantity of smartphones supplied when the price of a smartphone rises.

A rise in the price of a smartphone _____ the quantity supplied and _____ supply.

- ☐ A. does not change; increases
- ☐ B. increases; increases
- ☐ C. does not change; does not change
- ☒ D. **increases; does not change**



>>> Draw only the objects specified in the question.

24. Dairies make low-fat milk from full-cream milk. In the process of making low-fat milk, the dairies produce cream, which is made into ice cream.

The graph shows the supply curve of low-fat milk.

Suppose the price of cream rises.

Draw a new supply curve that shows the effect of this event. Label the curve.



>>> Draw only the objects specified in the question.

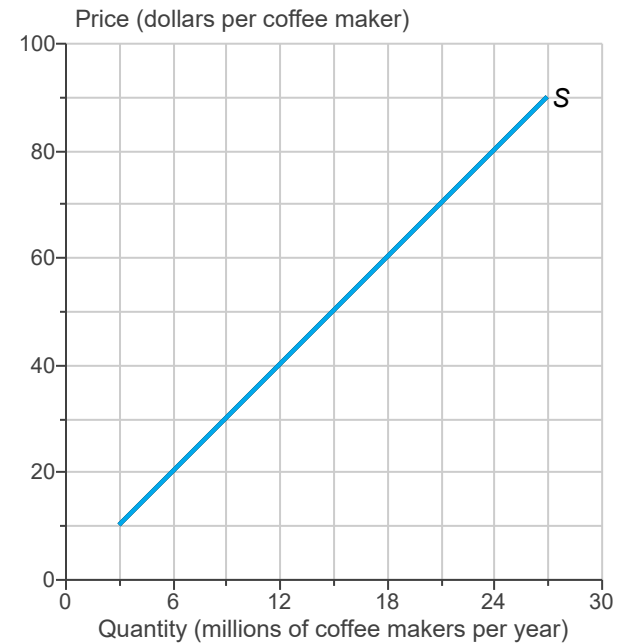
25. Which of the following statements by Aqua Springs demonstrates that the firm's selling plans obey the **law of supply**?

- ☐ A. We can easily decrease the production of plain water and increase the production of sparkling water.
- ☒ B. **If the price of bottled water falls and all the other influences on our selling plans remain the same, we will cut back on production and lay off some workers**
- ☐ C. We've been hit by a rise in the price of plastic bottles and will lower production.
- ☐ D. At a price of \$1 bottle, we plan to sell 2,000 bottles per day.

26. The figure shows the supply curve of coffee makers.

If the price of a coffee maker rises from \$20 to \$80, while all other influences on selling plans are unchanged, the quantity of coffee makers supplied _____.

- ☐ A. decreases from 24 million to 6 million
- ☐ B. increases by an unknown amount
- ☒ C. **increases from 6 million to 24 million**
- ☐ D. decreases by an unknown amount



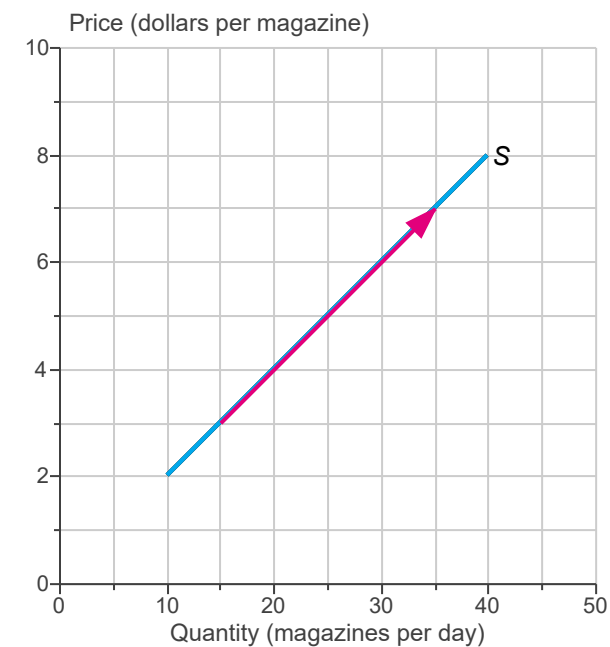
27. The figure shows the supply curve of magazines.

Draw an arrow to show what happens to firms' plans if the price of a magazine rises but all other influences on selling plans remain the same.

If the price of a magazine rises, a _____ the supply curve occurs.

If any factor that influences selling plans other than the price changes, then a _____ the supply curve occurs.

- ☐ A. movement down along; shift of
- ☐ B. leftward shift of; movement up along
- ☐ C. rightward shift of; movement down along
- ☒ D. **movement up along; shift of**



>>> Draw only the objects specified in the question.

28. How does the price elasticity of demand influence total revenue when a price cut occurs?

If a price cut increases total revenue, demand is _____. If a price cut decreases total revenue, demand is _____.

- ☐ A. unit elastic; inelastic
- ☐ B. elastic; unit elastic
- ☒ C. **elastic; inelastic**
- ☐ D. inelastic; elastic

If a price cut leaves total revenue unchanged, demand is _____.

- ☐ A. elastic
- ☐ B. inelastic
- ☒ C. **unit elastic**

29. Complete the sentence.

When calculating the price elasticity of demand, we calculate the change in the quantity demanded as the percentage of the average price and the change in the quantity as a percentage change of the average quantity because this method _____.

- ☒ A. **gives the same value for the elasticity regardless of whether the price falls or rises**
- ☐ B. is the only one that will calculate a value of zero when demand is perfectly inelastic
- ☐ C. allows us to calculate the price elasticity of demand as a positive number
- ☐ D. gives a units-free measure

30. Choose the statement that is true.

Price elasticity of demand _____.

- ☐ A. is equal to the percentage change in price divided by the percentage change in quantity demanded
- ☐ B. is measured in dollars
- ☒ C. **and the slope of the demand curve are two different concepts**
- ☐ D. is a measure of the responsiveness of the quantity demanded of a good to a change in income, when all other influences on buyers' plans remain the same

31. When the price of potato chips falls by 50 percent, the quantity demanded of potato chips increases by 80 percent.

What is the price elasticity of demand for potato chips?

The price elasticity of demand for potato chips is 1.60.

>>> Answer to 2 decimal places.

32. If the quantity demanded of soda decreases by 1 percent when the price of soda rises by 10 percent, what is the price elasticity of demand for soda?

The price elasticity of demand for soda is 0.10.

>>> Answer to 2 decimal places.

Based on the number you've calculated, the demand for soda is _____.

- ☐ A. elastic
- ☐ B. unit elastic
- ☒ C. inelastic

33. Complete the following sentence.

A decrease in tuition fees will decrease your college's total revenue if the price elasticity of demand for college education is _____.

- ☒ A. greater than zero and less than 1
- ☐ B. negative
- ☐ C. greater than 1
- ☐ D. equal to 1

34. With higher fuel costs, airlines raised their average fare from \$0.75 to \$1.25 per passenger mile and the number of passenger miles decreased from 2.5 million a day to 1.5 million a day.

What is the price elasticity of demand for air travel over this range? Describe the demand for air travel.

Over the price range of \$0.75 to \$1.25 per passenger mile, the price elasticity of demand is 1.0.

>>> Answer to 1 decimal place.

Over this price range, the demand for air travel is _____.

- ☒ A. unit elastic
☐ B. inelastic
☐ C. elastic

35. When Yara's income decreased from LBP (Lebanese pound) 100,000 to LBP 65,000 a week, she increased her demand for falafel sandwiches by 15 percent and decreased her demand for new clothes by 15 percent.

Calculate Yara's income elasticity of demand for falafel sandwiches and new clothes. Comment on the nature of both items.

>>> Answer to 2 decimal places.

>>> If your answer is negative, include a minus sign. If your answer is positive, do not include a plus sign.

Yara's income elasticity of demand for falafel sandwiches is - 0.35.

Yara's income elasticity of demand for new clothes is 0.35.

Falafel sandwiches are (1) _____ good, and new clothes are (2) _____ good.

- (1) ☐ a normal (2) ☐ an inferior
☒ an inferior ☒ a normal

36. A rise in the price of sushi of from 98¢ to \$1.02 a piece decreases the quantity of soy sauce demanded from 101 units to 99 units an hour and decreases the quantity of sushi demanded by 1 percent an hour.

Calculate the price elasticity of demand for sushi and the cross elasticity of demand for soy sauce with respect to the price of sushi.

>>> Answer to 2 decimal places.

>>> If your answer is negative, include a minus sign. If your answer is positive, do not include a plus sign.

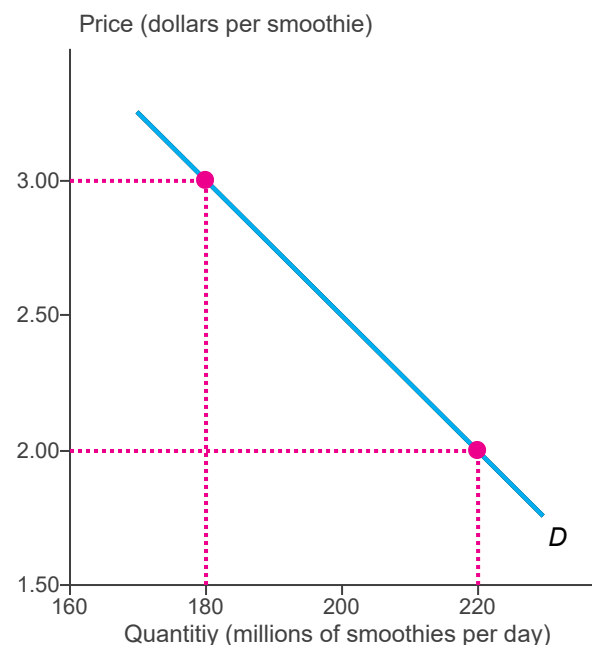
The price elasticity of demand for sushi is 0.25.

The cross elasticity of demand for soy sauce with respect to the price of sushi is - 0.5.

37. A rise in the price of a smoothie from \$2 to \$3 results in a decrease in the quantity of smoothies demanded from 220 million to 180 million a day and at today's price of a muffin, \$1.50, the quantity of muffins demanded increases from 80 million to 100 million a day.

4. Calculate the cross elasticity of demand for muffins with respect to the price of a smoothie.

The cross elasticity of demand for muffins with respect to the price of a smoothie is 0.55.



38. The table gives some data on the supply of roses in a small town.

When the price rises from \$17 a dozen to \$23 a dozen, the elasticity of supply is _____.

- ☐ A. 1.50
- ☐ B. 3.00
- ☐ C. 0.33
- ☒ D. 0.67

Price (dollars per dozen)	Quantity supplied (dozens per day)
17	9
23	11

39. Complete the sentence.

The demand for air travel between two cities doubles. The elasticity of the supply of air travel between these cities will _____.

- ☒ **A. become more elastic, the longer the time since demand doubled**
- ☐ B. become less elastic, the longer the time since demand doubled
- ☐ C. not change over time
- ☐ D. adjusts to become equal to the price elasticity of demand over time

40. When the price of a skateboard increases by 5 percent and the price of a scooter remains unchanged, the quantity of scooters demanded increases by 10 percent.

Calculate the cross elasticity of demand of scooters with respect to skateboards.

The cross elasticity of demand of scooters with respect to skateboards is 2.

>>> If your answer is negative, include a minus sign. If your answer is positive, do not include a plus sign.