

Connie has a monthly income of Rs. 200 that she allocates between carrots and potatoes. Suppose carrots costs Rs. 4 per pound and potatoes Rs. 2 per pound. Suppose also that her utility function is given by the equation  $U(C, P) = 2C - P$ . What combination of carrots and potatoes should she buy to maximize her utility? (Hint: carrots and potatoes are perfect substitutes.)

- 50 pounds of carrots and no potatoes
- 100 pounds of potatoes and no carrots
- Any combination of carrots and potatoes on the budget line.
- She shouldn't buy any combination.

**Correct answer**

- Any combination of carrots and potatoes on the budget line.



With reference to the previous question, Connie's supermarket has a special promotion. If she buys 20 pounds of potatoes (at Rs. 2 per pound), she gets the next 10 pounds for free. This offer applies only to the first 20 pounds she buys. All potatoes in excess of the first 20 pounds (excluding bonus potatoes) are still Rs.2 per pound. What are the X and Y intercepts of the new budget line?

- 90, 50
- 100, 40
- 110, 50
- 100, 60

An outbreak of potato rot raises the price of potatoes to Rs. 4 per pound. The supermarket ends its promotion. What combination of carrots and potatoes maximizes her utility?

- 50 pounds of carrots and 50 pounds of potatoes
- 50 pounds of carrots and no potatoes
- 50 pounds of potatoes and no carrots
- All of the above

Suppose you are in charge of a toll bridge that costs essentially nothing to operate. The demand for bridge crossings  $Q$  is given by  $P = 15 - \frac{Q}{2}$



How many people would cross the bridge if there were no toll?

2/2

- 15
- 20
- 25
- 30

What is the loss of consumer surplus associated with a bridge toll of Rs 5?

2/2

- 100
- 125
- 200
- 250

The toll-bridge operator is considering an increase in the toll to Rs 7. At this higher price, would the toll-bridge revenue increase or decrease? to what amount?

2/2

- Revenue increases by Rs. 15
- Revenue decreases by Rs. 12
- Revenue increases by Rs. 25
- None of the above



The demand for toll-bridge is

2/2

- Inelastic
- Elastic
- Perfectly inelastic
- Perfectly elastic

Find the change in consumer surplus associated with the change in the price of 0/2 the toll from Rs. 5 to Rs. 7.

- Increases by 36
- Decreases by 64
- Increases by 64
- Decreases by 36

Correct answer

- Decreases by 36



David is considering his purchases of food ( $x$ ) and clothing ( $y$ ). He has the utility function  $U(x, y) = xy + 10x$ . If David has an income of Rs. 10 and he faces a price of food,  $P_x = \text{Rs. } 1$  and a price of clothing  $P_y = \text{Rs. } 2$ , what is David's optimal consumption basket?

- $x = 15, y = 2.5$
- $x = 2.5, y = 15$
- $x = 10, y = 0$
- $x = 0, y = 5$

Sara views chocolate and vanilla ice cream as perfect substitutes. She likes both and is always willing to trade one scoop of chocolate for two scoops of vanilla ice cream.

Which of the following is true for Sara?

0/2

- The marginal utility for chocolate is twice as large as her marginal utility for vanilla.
- The marginal utility for vanilla is twice as large as her marginal utility for chocolate.
- Both of the above
- None of the above

Correct answer

- The marginal utility for chocolate is twice as large as her marginal utility for vanilla.



If the price of a scoop of chocolate ice cream (PC) is three times the price of vanilla (PV), which type of ice cream will Sara buy in her optimal consumption basket? 0/3

- She will buy only chocolate ice-cream
- She will buy only vanilla ice cream
- She will buy more vanilla and less chocolate ice-cream
- She will stop buying ice-cream

Correct answer

- She will buy only vanilla ice cream

A consumer purchases two goods, food and clothing. The utility function is  $U(x, y) = xy$  where  $x$  denotes the amount of food consumed and  $y$  the amount of clothing. The price of food is  $P_x$ , the price of clothing is  $P_y$ , and income is  $I$ .

The equation of the demand function of food is 0/3

- $x = I/P_x$
- $y = I/P_y$
- $x = I/P_y$
- $y = I/P_x$



Consider the following demand and supply relationships in the market for golf balls:  $Q_d = 90 - 2P - 2T$  and  $Q_s = -9 + 5P - 2.5R$ . Where T is the price of titanium, a metal used to make golf clubs, and R is the price of rubber.

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If  $R = 2$  and  $T = 10$ , calculate the equilibrium price and quantity of golf balls. 4/4

- P = 46 and Q = 12
- P = 12 and Q = 46
- P = 15 and Q = 56
- P = 56 and Q = 14

At the equilibrium values, what is the price elasticity of demand? 3/3

- 0.54
- 0.25
- 0.52
- 1.30



At the equilibrium values, what is the price elasticity of supply?

3/3

- 0.54
- 0.25
- 1.30
- 0.52

At the equilibrium values, calculate the cross-price elasticity of demand for golf balls with respect to the price of titanium.

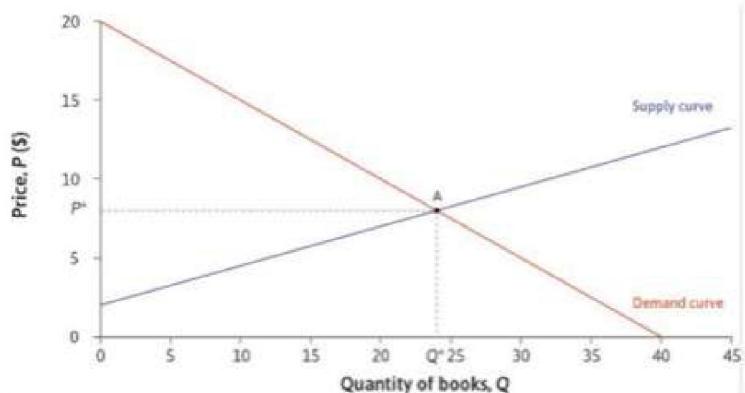
- 0.43
- 0.33
- 0.43
- 0.33

In this situation, titanium and golf balls are

2/2

- Substitutes
- Complements
- Neutral goods
- None of the above





The diagram shows the demand and supply curves for a textbook. The curves intersect at  $(Q,P) = (24, 8)$ .

Which of the following is correct.

0/2

- At price Rs. 10, there is excess demand for the textbook.
- At Rs. 8, no seller has the incentive to increase their selling price to Rs. 9.
- At Rs. 8 there is excess supply.
- 40 books will be sold at total.

Correct answer

- At Rs. 8, no seller has the incentive to increase their selling price to Rs. 9.



Which of the following is correct.

2/2

- At Rs. 8, market clears.
- Total 40 books will be demanded if price is Rs. 3.
- Both of the above
- None of the above

0/2

The following representation of preferences, answer who else has the same preferences as Ronnie?

$$\text{Mick: } U(X, Y) = X + Y$$

$$\text{Keith: } U(X, Y) = \frac{(X + Y)}{(X + Y)^2}$$

$$\text{Ronnie: } U(X, Y) = 10(X + Y) - 100$$

$$\text{Charlie: } U(X, Y) = \ln(10(X + Y))$$

$$\text{Bill: } U(X, Y) = -10(X + Y) + 100$$

- Everyone
- Everyone but Keith and Mick
- Everyone but Keith and Bill
- Everyone but Mick and Bill

Correct answer

- Everyone but Keith and Bill



The share of food expenditure in total expenditure for urban consumers in India 2/2 was 56% in 1987-88 which changed to 41% in 2009-10. Which of the following can appropriately explain this phenomenon.

- Operation of Law of diminishing off Marginal Utility.
- Operation of Engel's law
- Operation of Law of demand
- Operation of Giffen's paradox

For an ordinary, inferior good, the Engel curve and the demand curve will

0/2

- Both slope positively
- Both slope negatively
- Both have slopes with opposite signs
- None of the above

Correct answer

- Both slope negatively



The demand for A/C units in an area with high temperature (like the tropical area) is 0/2

- Highly price elastic in the short run but not in the long run
- Highly price elastic in the long run but not in the short run
- Highly price inelastic both in the short and the long run
- Highly price elastic both in the short run and the long run

Correct answer

- Highly price elastic in the short run but not in the long run

0/1

Cosmo Kramer consumes two goods: cola and bread. His optimal consumption bundle is such that he consumes four units more of cola than bread. Let  $P_C$ ,  $P_B$ , and  $M$  be the price of coke, the price of bread, and Cosmo's income, respectively. His demand function for bread is  $Q_B = :$

- $(M + 4PC)/PB.$
- $(M - 4PB)/PC.$
- $(M - 4PC)/(PB + PC).$
- $(M + 4PB)/PC.$
- Other: .....



Jane always derives twice as much utility from an extra ballet ticket as she does from an extra basketball ticket, regardless of which ticket she has. .../1

Suppose the price of ballet tickets is thrice off the price of basketball tickets. Then the Engel curve for Jane

- Is an upward sloping straight line
- Is a downward sloping straight line
- Takes a parabolic shape
- Is a non-continuous line

No correct answers



Consider a differentiable and strictly convex utility function  $U(x_1, x_2)$  and budget line of the consumer is  $P_1x_1 + P_2x_2 = I$ . Condition for utility maximisation is

- MRS = Slope of the budget line

Ratio of the marginal utilities of  $x_1$  and  $x_2$  =  $\frac{P_1}{P_2}$

- Option 3
- All of the above

$$\frac{MU_1}{P_1} = \frac{MU_2}{P_2}$$

- Option 4



Choose the correct statement for marginal utility and marginal rate of substitution

2/2

- Marginal utility is not ordinal and changes for monotonic transformation of a utility function.
- MRS is ordinal and does not change for monotonic transformation of a utility function.
- Both
- None

Consider a production function whose equation is given by the formula  $Q = \sqrt{KL}$ . With respect to this production function, answer the following questions

Suppose K = 8 and L = 2 units. Then the value of the marginal product of labor is 2/2

- 1
- 2
- 3
- 4



Now suppose  $K = 3$  and  $L = 27$  units. The value of the marginal product of capital is

2/2

- 2/3
- 1
- 3/2
- 0

0/2

The Marginal rate of technical substitution of labour for capital ( $MRTS_{LK}$ ) is equal to

- $L/K$
- $K/L$
- 1
- 0

Correct answer

- $K/L$



The value of elasticity of substitution (elasticity of substitution is the elasticity of the ratio of two inputs with respect to the ratio of their marginal products) is equal to 0/2

- 1
- 0
- always 1
- always 0

Correct answer

- always 1

The director of a theatre company in a small college town is considering changing the way he prices tickets. He has hired an economic consulting firm to estimate the demand for tickets. The firm has classified people who go to the theater into two groups, and has come up with two demand functions.

The demand function for the general public,  $Q_p = 500 - 5P$

The demand function for the college students,  $Q_s = 200 - 4P$



If the current price of tickets is Rs. 35, what is the quantity demanded by the general public and the college students? 3/3

- 60, 325
- 40, 335
- 325, 40
- 325, 60

What is the price elasticity of demand for the general public at the current price and quantity demanded? 3/3

- 0.45
- 0.54
- 3.22
- 2.33

What is the price elasticity of demand for the college students at the current price and quantity demanded? 3/3

- 0.54
- 0.45
- 3.22
- 2.33



Is the revenue maximized at the current price (Rs. 35)?

2/2

- Yes
- No
- Cannot be said
- None of the above

What price should be charged to the general public to maximize the revenue?      3/3

- 100
- 150
- 200
- 250

What price should be charged to college students to maximise the revenue?      3/3

- 100
- 200
- 250
- 400



Juny has decided to allocate exactly Rs. 500 to college textbooks every year even though she knows that the prices are likely to increase by 5 to 10 percent per year and that she will be getting a substantial monetary gift from her grandparents next year. What is the price elasticity of demand for textbooks? What is income elasticity?

3/3

- 0, 1
- 1, 2
- 1, 0
- 1.5, 1.5

1/1

Does a Cobb–Douglas production function,  $Q = A L^\alpha K^\beta$ , exhibit increasing, decreasing, or constant returns to scale?

- always decreasing
- always increasing
- always constant
- always depends on the values of  $\alpha$  and  $\beta$

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