Unit 1.5 Cost-Benefit Analysis Homework

AP Microeconomics — Total: 19 questions

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1. 题库 Marginal Analysis Q1

Levels of Cleanup	Total Cost of Cleanup ($)	Total Benefit of Cleanup ($)
0	0	0
1	5	10
2	15	18
3	30	24
4	50	28
5	75	30

The table above shows the total cost and the total benefit of cleaning up pollution in a community. Which of the following cleanup levels is socially optimal?

(A) 1
(B) 2
(C) 3
(D) 4
(E) 5

2. 题库 Marginal Analysis Q6 (FRQ)

Include correctly labeled diagrams, if useful or required, in explaining your answers. A correctly labeled diagram must have all axes and curves clearly labeled and must show directional changes. If the question prompts you to "Calculate," you must show how you arrived at your final answer.

The table below shows the total cost and total benefit of advertisements placed by Foods, a firm in the retail food market.

Number of Advertisements	Total Cost ($)	Total Benefit ($)
0	0	0
1	100	200
2	250	350
3	450	450
4	700	500
5	1000	525

(a) Calculate the total net benefit of placing three advertisements. Show your work.

(b) Calculate the marginal net benefit of the third advertisement. Show your work.

(c) What is the optimal number of advertisements placed by Foods? Explain using marginal analysis.

(d) Suppose over the next year the marginal benefit that Foods receives from each advertisement increases by $50. Identify the optimal number of advertisements.

(e) There are many firms in the retail food market. Each firm places its own firm-specific advertisements without considering the actions of its competitors. In what market structure is Foods operating?

3. 题库 Marginal Analysis Q9

All of the following are included in computing the opportunity cost of attending college EXCEPT

(A) interest paid on student loans
(B) wages the student gave up to attend college
(C) money spent on college tuition
(D) money spent on clothing expenses
(E) money spent on books and supplies

4. 题库 Marginal Analysis Q11

Marginal analysis suggests that an individual will consume one additional unit of a good if the

(A) sunk cost can be recovered
(B) total benefit is less than the total cost
(C) total benefit is greater than the total cost
(D) additional benefit is less than the additional cost
(E) additional benefit is greater than the additional cost

5. 题库 Marginal Analysis Q15

Using cost-benefit analysis, a local government would decide to build a new bridge if

(A) The additional tax paid by an individual resident is greater than the additional benefit of building the bridge for all residents.
(B) The toll paid by an individual resident crossing the bridge is less than the resident's benefit from crossing the bridge.
(C) The total costs of building the bridge are less than the total benefits from building the bridge.
(D) The total costs of building the bridge are greater than the total benefits from building the bridge.
(E) Total costs are at a minimum and total benefits are at a maximum.

6. 题库 Marginal Analysis Q16

Hours at the Library	Total Benefit	Total Cost
1	12	4
2	20	10
3	26	18
4	31	28
5	33	40

The table provided shows the total benefits and costs of studying at the library. If the student is rational, the optimal number of hours to spend at the library is

(A) 1
(B) 2
(C) 3
(D) 4
(E) 5

7. 题库 Marginal Analysis Q21

Which of the following best defines opportunity cost?

(A) It is the cost of producing those goods most desired by a given economy.
(B) It is the cost of the input mix that will lead to the greatest rate of growth for a given company.
(C) It is the amount of one product that must be given up in order to produce an additional unit of another product.
(D) It is the use of the least-cost method of production.
(E) It is the cost of labor used in the production process.

8. 题库 Marginal Analysis Q26

An opportunity cost is entailed in which of the following situations?

I. A student decides to attend college full-time.

II. A family uses its $20,000 savings to purchase an automobile.

III. A farmer decides to grow more wheat and less corn.

(A) I only

(B) II only

(C) III only

(D) I and III only

(E) I, II, and III

9. 题库 Marginal Analysis Q32

Karen works part-time at a local convenience store and earns $10 per hour. She wants to spend next Saturday afternoon attending a music concert. The full price of a concert ticket is $75, but Karen was able to get a discounted price of $50 from a friend who purchased the ticket but has become unable to attend. If Karen took 4 hours off from her job to attend the concert, what was her opportunity cost of attending the concert?

(A) $40

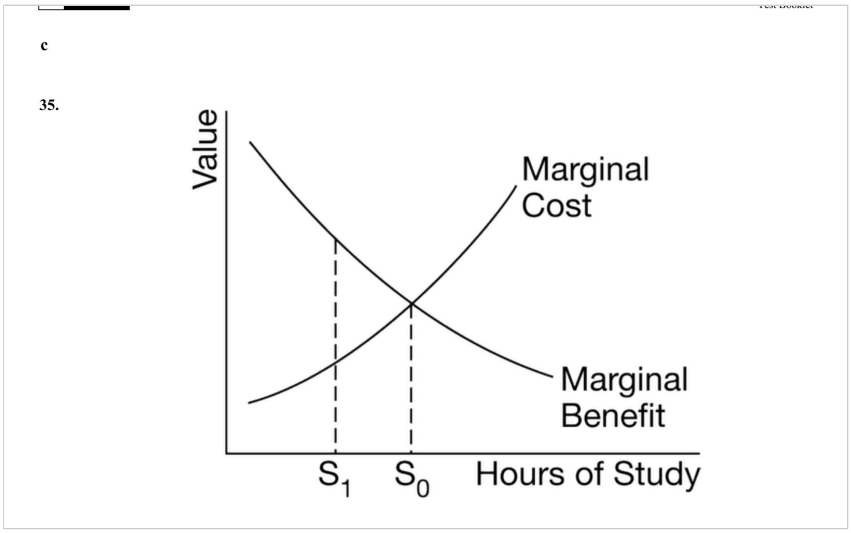
(B) $50

(C) $75

(D) $90

(E) $115

10. 题库 Marginal Analysis Q35



The graph above shows the marginal benefit that a student receives from additional hours of study, and the marginal cost the student will incur from additional hours of study. Which of the following is true?

(A) Beyond S_0 hours of study, there is no further benefit from devoting additional hours to study.

(B) At S_1 hours of study, the extra cost of study time exceeds the extra benefit of study time.

(C) The optimal number of hours that the student should study is S_0 hours.

(D) The rational individual should study more than S_0 hours.

(E) The marginal cost of studying decreases as more time is spent studying.

11. 题库 Marginal Analysis Q43

Mr. Carpenter devotes his working time to producing tables and chairs. An increase in the demand for chairs will result in

(A) an increase in the amount of time he devotes to producing tables

(B) an increase in his opportunity cost of producing tables

(C) a decrease in the price of lumber

(D) a decrease in the price of chairs

(E) a decrease in his total revenue

12. 题库 Marginal Analysis Q47 (FRQ)

Nirali is a student at the University of Ainsley. She has 5 hours to study for two exams today. The tables below show Nirali's expected scores given the amount of time she studies for each exam.

Hours Studying Microeconomics	Expected Micro Score	Hours Studying History	Expected History Score
0	60	0	65
1	75	1	78
2	86	2	88
3	92	3	93
4	96	4	96
5	98	5	98

(a) Nirali spends 3 hours studying microeconomics and 2 hours studying history. Calculate her gain from the second hour spent studying history.

(b) Calculate Nirali's opportunity cost of the second hour spent studying history.

(c) Assume Nirali increases the time she allocates to studying history. What happens to the opportunity cost of studying history? Explain.

(d) Assume that Nirali has a goal of maximizing the sum of her test scores (the score on microeconomics plus the score on history). How many hours should she study for each exam?

(e) Nirali learns that her tennis practice has been canceled, freeing up an additional hour for studying. Given your answer to part (d), will Nirali allocate the additional hour to studying microeconomics or to studying history to maximize the sum of her test scores? Explain using marginal analysis.

13. 题库 Marginal Analysis Q48

Opportunity cost is defined as

(A) excess demand for a good
(B) unlimited resources and unlimited wants
(C) a comparative advantage in the production of a good
(D) the value of the next best alternative that is forgone when an activity is pursued
(E) the value of all other possible alternatives that are forgone when an activity is pursued

14. 题库 Marginal Analysis Q49

After graduating from high school, Maria chose to go to college, while Omar chose to work full-time. Which of the following best describes the opportunity costs for these decisions?

(A) Maria's opportunity cost includes the salary she could have earned if she had gone to work.
(B) Maria's opportunity cost is her living expenses while attending college.
(C) Omar's opportunity cost is the salary he will earn from working.
(D) Omar's opportunity cost is the tuition and expenses he would have paid for college.
(E) Omar's opportunity cost is definitely greater than Maria's.

15. 题库 Marginal Analysis Q53

After graduating from high school, Peggy Smith decided to enroll in a two-year program at the local community college rather than to accept a job that offered a salary of $12,000 per year. If the annual tuition and fees are $4,600, the annual opportunity cost of attending the community college is

(A) $4,600
(B) $7,400
(C) $12,000
(D) $16,600
(E) $33,200

16. 题库 Marginal Analysis Q56

Assume a worker can either cut grass or wash windows in a given day. It takes 5 hours to mow a one-acre lawn and 2.5 hours to wash all the windows in a house. When a worker chooses to wash the windows of four houses in a neighborhood, what is the opportunity cost of this decision?

(A) The pay the worker receives for washing the windows in the four houses
(B) The pay the worker would receive for cutting one lawn
(C) Cutting the grass at the same four houses
(D) The pay the worker would have received from cutting the grass at two houses
(E) The pay the worker would receive for cutting .25 lawns

17. 题库 Marginal Analysis Q57

The amount of product Z that must be forgone in order to obtain some amount of product Y is called

(A) factor payments
(B) opportunity cost
(C) marginal product
(D) income effect
(E) substitution effect

18. 题库 Marginal Analysis Q61

Project	Total Costs (in millions)	Total Benefits (in millions)
Widening existing highways	$100	$80
Building new highways	$100	$90
Building a new bridge	$100	$140
Building a new tunnel	$100	$115
Expanding an existing airport	$100	$130

The table above shows the costs and benefits for new construction projects the government is considering. Based on these costs and benefits, which of the construction projects should the government undertake?

(A) Widening existing highways and building new highways only
(B) Building a new bridge only
(C) Building a new bridge and building a new tunnel only
(D) Building a new bridge, building a new tunnel, and expanding an existing airport
(E) All five projects

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19. 2021 AP Micro MCQ Q1

Raheem is currently working as a financial analyst earning $75,000 a year and is considering quitting his current job to start an art gallery. The estimated annual revenue from the art gallery is $175,000. The annual cost of labor, advertising, and acquiring the art inventory is $125,000. What are Raheem's accounting and economic profits if he opens the art gallery?

(A) Accounting profit is −$25,000, and economic profit is $50,000.
(B) Accounting profit is $100,000, and economic profit is $50,000.
(C) Accounting profit is $50,000, and economic profit is −$25,000.
(D) Accounting profit is $100,000, and economic profit is −$25,000.
(E) Accounting profit is $50,000, and economic profit is $100,000.