

Week 3 Packet

Closing Unit 1 and opening Unit 2 • Modules 1.5, 1.6 and 2.1

Name _____

DAY 7 • 90-MINUTE BLOCK

Finishing Unit 1: Marginal Analysis and Consumer Choice

Modules 1.5 and 1.6. The Unit 1 test is the next long block.

Module 1.5 check

You read cost-benefit analysis on your own. Two questions before we move on.

1. A decision can be repeated one unit at a time. What rule tells you when to stop?

2. You have already spent NT\$300 on a concert ticket you now cannot use. Should that NT\$300 affect what you do tonight?

Part A • Total and Marginal Utility

A student is at Fengjia Night Market. Utility is measured in made-up units called utils, which only matter relative to each other.

Total utility is the satisfaction from everything bought so far. Marginal utility is the satisfaction added by ONE more unit.

Bubble tea	1st	2nd	3rd	4th	5th
Total utility	200	350	450	525	575
Marginal utility	200				

Dumplings	1st	2nd	3rd	4th	5th
Total utility	500	900	1,200	1,400	1,500
Marginal utility	500				

The first cell of each marginal row is done for you. Each one after that is the change in total utility.

Q1. What happens to marginal utility as the student buys more of a good? Name the law.

Q2. Total utility keeps rising even though marginal utility is falling. Explain how both can be true at once.

Part B • Utility per Dollar

Bubble tea costs NT\$50. A plate of dumplings costs NT\$100. Divide each marginal utility by its price.

Marginal utility per NT\$	1st	2nd	3rd	4th	5th
Bubble tea (NT\$50)	4				
Dumplings (NT\$100)	5				

Q3. A plate of dumplings adds 500 utils and a bubble tea adds only 200. Why is that not enough to say dumplings are the better buy?

Part C • Spending NT\$400

The student has NT\$400 and wants as much total utility as possible.

How to work it out

Buy the next unit that gives the most utility per NT\$, whichever good it is.

Keep going until the money runs out.

Check your answer two ways: the budget must be fully spent, AND the last unit of each good should give the same utility per NT\$.

Q4. What should the student buy? Show that the budget is exactly spent.

Q5. Check the second condition. What is the marginal utility per NT\$ of the last unit of each good?

Q6. What total utility does that bundle give?

Q7. Two other bundles also cost exactly NT\$400: four teas with two plates, and four plates with no tea. Work out the total utility of each and say why neither wins.

Part D • The Rule

Two conditions have to hold at once. Both matter, and students routinely give one and stop.

Q8. Write the utility maximizing rule in your own words. It has two halves.

Q9. Suppose at some bundle a dollar spent on dumplings adds more utility than a dollar spent on tea. What should the student do, and why does that raise total utility?

Part E • What Happens When a Price Falls

A stall war breaks out and dumplings drop to NT\$50. Nothing else changes: same student, same utilities, same NT\$400.

Marginal utility per NT\$	1st	2nd	3rd	4th	5th
Bubble tea (still NT\$50)	4	3	2	1.5	1
Dumplings (now NT\$50)					

Q10. Redo Part C with the new price. What should the student buy now?

Q11. Check the rule again. What is the marginal utility per NT\$ of the last unit of each good?

Q12. Compare the number of plates bought before and after the price fell.

Q13. You have just derived something you will spend all of next month on. What is it?

Unit 1 on One Page

Module	What you must be able to DO
1.1 Scarcity	Name the four factors of production. State opportunity cost as the value of the next best alternative given up. Separate positive from normative statements.
1.2 Systems	State the three questions every system answers. Identify market, command, traditional and mixed from a description.
1.3 PPC	Calculate opportunity cost between two points. Explain the bow using resource specialization. Place points inside, on and outside. Shift the curve, and PIVOT it when only one good improves.
1.4 Comparative advantage	Build the four-cell opportunity cost table. Separate absolute from comparative advantage. State a terms of trade range. Explain gains from trade.
1.5 Cost-benefit	Continue while marginal benefit is at least marginal cost. Ignore sunk costs. Compare marginal against marginal, never against average.
1.6 Consumer choice	Build marginal utility from total utility. Divide by price. Find the bundle where utility per dollar is equal AND the budget is spent.

Three habits that cost real points

SAY THE UNIT. "0.5" scores nothing. "0.5 tons of rice per bicycle" scores.

CITE BOTH NUMBERS. Naming a country without comparing the two opportunity costs earns partial credit at best.

LABEL BOTH AXES. An unlabeled correct graph and a labeled wrong graph score about the same.

Practice Free Response

6 points · about 12 minutes · the test has one of these, worth 10 points

The United States and Mexico both produce cars and corn. Assume constant opportunity cost. The table shows the maximum each could produce using all of its resources on one good.

** The figures are illustrative, not real production data.*

Country	Cars (thousands)	Corn (thousands of tons)
United States	40	80
Mexico	20	20

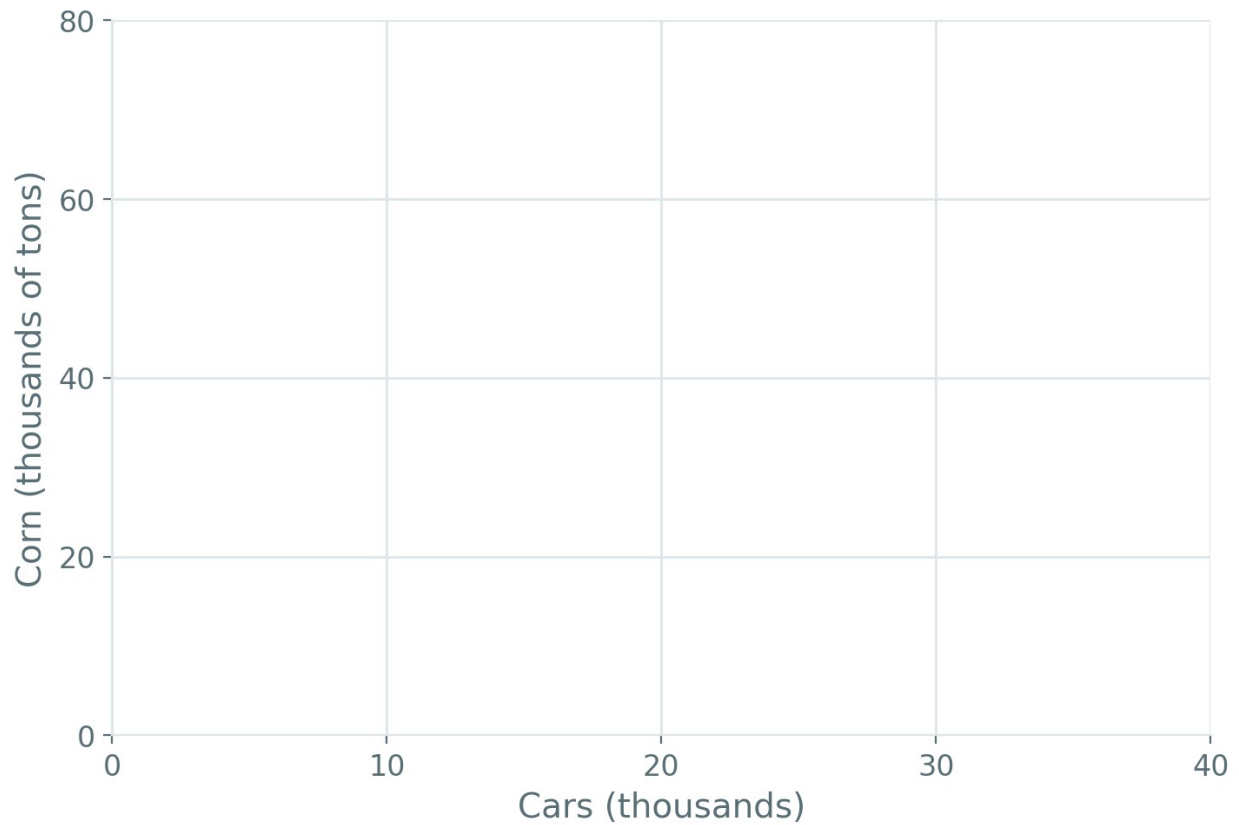
(a) Calculate the opportunity cost to the United States of producing one car, in tons of corn. Show your work. (1 point)

(b) Identify the country with a comparative advantage in cars. Explain using the opportunity costs of BOTH countries. (2 points)

Practice Free Response, continued

(c) On the axes below, draw the United States' production possibilities curve. Your line must touch 40 on the car axis and 80 on the corn axis, and it must be straight because opportunity cost is constant. Then mark a point clearly INSIDE the curve and label it U. (2 points)

Draw and label the United States' curve here



(d) The United States adopts a technology that improves car building only. Describe what happens to the curve, and state what happens to the corn intercept. (1 point)

DAY 9 • 45-MINUTE BLOCK**Opening Unit 2: Demand**

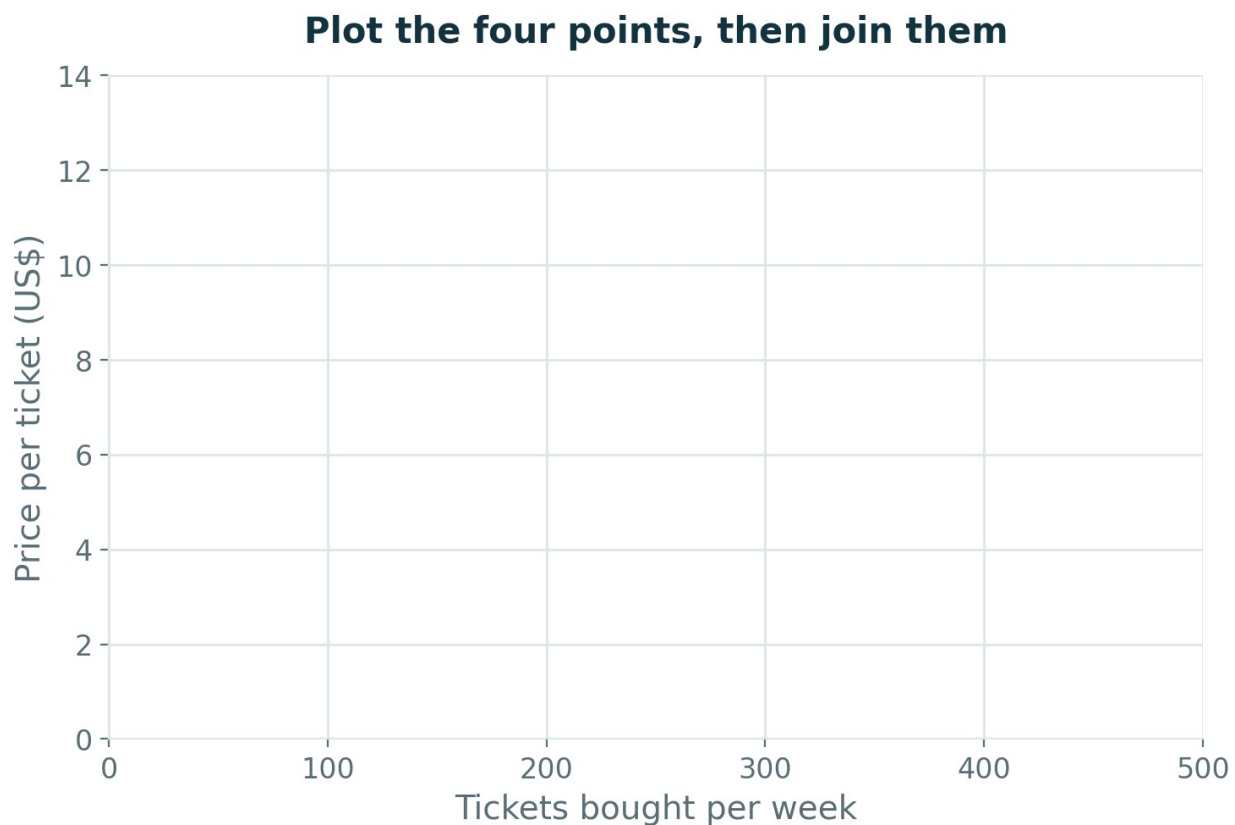
Module 2.1. Unit 2 is the largest unit in the course, 20 to 25 percent of the exam.

Part A • A Demand Schedule

A cinema near the school tracked how many tickets students bought each week at four different prices. Nothing else changed while it collected the data.

Price per ticket	\$12	\$10	\$8	\$6
Tickets bought per week	100	200	300	400

Q14. Plot the four points on the axes below, join them, and label the line D.



Part B • Why It Slopes Down

Three separate reasons, and you already calculated the third last block.

The three reasons

SUBSTITUTION EFFECT. When tickets get dearer, streaming and bowling look better by comparison, so students switch some spending across.

INCOME EFFECT. A higher price makes a student's weekly budget buy less overall, so they can afford fewer trips even if they still want to go.

DIMINISHING MARGINAL UTILITY. A fourth trip to the cinema in one week is worth less than the first, so students will only go more often if the price falls to match.

Q16. Which of the three reasons did you calculate directly in the Day 7 utility table? Explain how the table showed it.

Part C • What Moves the Curve

A change in the good's OWN price moves you along the curve. A change in anything else shifts the whole curve. Sort each event.

Event	Along the curve, shift right, or shift left?
1. The cinema raises the ticket price to \$14	
2. Students' part-time paycheques get bigger	
3. A streaming service cuts its monthly price	
4. A film everyone has been waiting for opens	
5. Enrolment falls and half the students leave	
6. Everyone expects tickets to cost more next month	

Q17. Only one event above moves you along the curve rather than shifting it. Which one, and what makes it different from the other five?

Q18. Event 3 involves a price, yet it shifts the curve. Explain why that does not contradict the rule.

And that wraps up week 3!