

## PROBLEM SET 2 – Tutorial Week 4 (August 29–September 2)

*Deadline:* 11:59 p.m. two days before your tutorial. Please submit a PDF in groups of 2–3 within your tutorial group. On the first page, write your full names (as on the roster) in alphabetical order. Start each question on a new page. Name your PDF “PSet # – LastName LastName LastName,” e.g., “PSet 2 – Banerjee Duflo Kremer.” Points will be deducted for not adhering to the instructions. You only need to submit your answers to Section B.

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### Section A

1. For each of the following cases, draw a supply-and-demand graph for the market for pasta, and determine what happens to the equilibrium price and the equilibrium quantity of pasta.
  - (a) There is a sudden increase in the price of semolina flour, which is used to make pasta.
  - (b) Pasta suddenly becomes popular because a movie star promotes it in commercials.
  - (c) New studies show that pasta isn’t as healthful as previously thought, and the results of these studies are widely publicized in the media.
  - (d) There is a large expansion in the number of firms producing pasta.

2. Read the following article:

*The New York Times*. December 3, 2019. “Fake Meat vs. Real Meat.”

<https://www.nytimes.com/2019/12/03/well/eat/fake-meat-vs-real-meat.html>

What is the impetus behind the marketing campaign by the Center for Consumer Freedom? Draw demand-and-supply graphs to show why the marketing campaign was launched. Explain your graphs concisely. Quote phrases from the article to support your explanation.

3. (a) Suppose demand and supply in the market for nopales can be expressed by these equations:

$$Q^D = 100 - P \quad \text{and} \quad Q^S = 30 + 0.5P.$$

If the prevailing market price is \$40, what are the quantity demanded and the quantity supplied? What can you say about this situation?

- (b) Suppose demand and supply in the market for samphire can be expressed by these equations:

$$Q^D = 280 - 20P \quad \text{and} \quad Q^S = 40 + 100P.$$

Find the equilibrium price and the equilibrium quantity.

4. For each of the following statements, determine whether the terminology of the supply-and-demand model is used correctly.
  - (a) Pizza prices increased. Therefore, the demand for pizza went down.
  - (b) The supply of pizza increased. Therefore, pizza prices declined.

5. An analyst observes the following equilibrium price-quantity combinations in the market for restaurant meals in a city over a four-year period.

Year	$P$	$Q$ (meals per month)
2019	\$33	20 million
2020	\$36	25 million
2021	\$40	30 million
2022	\$44	34 million

He concludes that the market defies the law of demand. Is he correct? Why or why not?

6. Suppose a decrease in consumers' income causes a decrease in the demand for morel and an increase in the demand for shiitake. Which good is inferior and which is normal? What will happen to the equilibrium price and quantity of morel and of shiitake?

### Section B

1. Read the following article:

Reuters. April 29, 2020. "Coronavirus Brews Trouble for Tea, Disrupts Supply as Demand Spikes."

<https://www.reuters.com/article/us-health-coronavirus-tea-idUSKCN22B09N>

- What are the factors affecting the supply of tea?
- What are the factors affecting the demand for tea?
- Draw a supply-and-demand graph depicting the global market for tea. Explain.

2. Read the following article:

The New York Times. November 19, 2013. "Why is Turkey Cheaper when Demand is Higher?"

<http://www.nytimes.com/2013/11/24/magazine/why-is-turkey-cheaper-when-demand-is-higher.html>

- What is the supply-side explanation for the fall in the price of turkey around Thanksgiving?
- Can you think of another good with a similar supply-side pattern?
- What is the demand-side explanation for the fall in the price of turkey around Thanksgiving?
- Can you think of another good with a similar demand-side pattern?

3. Read the following article:

*Channel News Asia*. July 1, 2021. "Durian sellers prepare for higher demand as the peak period nears."

<https://www.channelnewsasia.com/news/singapore/durian-sellers-higher-demand-peak-period-15125496>

- (a) Most durian sellers predict that the price of durian will fall in the coming weeks. Is the fall in the price of durian due to a shift of the demand curve or a shift of the supply curve?
- (b) What words or terms in the article do you find to be ambiguous or incorrectly used?
4. Scones and clotted cream are often eaten together; they are complements. Suppose we observe that both the equilibrium price of scones and the equilibrium quantity of clotted cream have decreased. What could be responsible for this pattern – a fall in the price of flour or a rise in the price of cream? Draw a graph for the market for scones and another graph for the market for clotted cream to explain your answer. Summarize the steps you took to answer this question.
5. Read the following article:  
*The New York Times*. January 10, 2014. "Is Uber's Surge-Pricing an Example of High-Tech Gouging?"  
<https://www.nytimes.com/2014/01/12/magazine/is-ubers-surge-pricing-an-example-of-high-tech-gouging.html>
- Draw supply-and-demand graphs for the following scenarios:
- (a) A taxi ride regularly costs \$13.
- (b) The price of a taxi ride is "fixed" at \$13 at 1:00 a.m. on New Year's Day. Does either the demand curve or the supply curve shift (relative to (a))?
- (c) Uber charges \$47 for the 1:00 a.m. ride on New Year's Day. Does either the demand curve or the supply curve shift (relative to (b))? What is Uber's rationale for charging \$47?
6. The demand for bonsai in a market is as follows:

Price (per bonsai)	Quantity Demanded (bonsai per week)
\$105	35
\$95	45
\$75	65
\$65	75
\$45	95
\$35	105

- (a) Calculate the price elasticity of demand for bonsai for a price increase from \$35 to \$45. Is demand elastic, inelastic, or unit elastic for this price change? (*Reminder: Use the midpoint method.*)
- (b) Calculate the price elasticity of demand for bonsai for a price increase from \$65 to \$75. Is demand elastic, inelastic, or unit elastic for this price change?
- (c) Calculate the price elasticity of demand for bonsai for a price increase from \$95 to \$105. Is demand elastic, inelastic, or unit elastic for this price change?
- (d) What can you say about the relationship between slope and elasticity?
- (e) Is your answer to (d) consistent with your answers to (a)–(c)?