ECON 103 Name Sam

Chapter 6 Assignment

1. The Cozy Chair Company believes it can sell 200 chairs at $200 per chair, or 300 chairs at $150 per chair. Using the midpoint formula, you can calculate that the price elasticity of demand for Cozy Chairs is:
   A) 2.5.
   B) 1.4.
   C) 0.7.
   D) 0.5.

$$\frac{\left|\frac{300-200}{300+200}\right|}{\left|\frac{150-200}{150+200}\right|} = \frac{\frac{1}{5}}{\frac{1}{7}}$$

2. The Coffee Craze Coffee Shoppe Company believes it can sell 200 coffees at $2.00 per coffee, or 300 coffees at $1.50 per coffee. Using the midpoint formula, the price elasticity of demand for the Coffee Craze Coffee Shoppe is:
   A) 2.5.
   B) 1.4.
   C) 0.7.
   D) 0.5.

$$\frac{\left|\frac{300-200}{300+200}\right|}{\left|\frac{1.5-2}{1.5+2}\right|} = \frac{\frac{1}{5}}{\frac{1}{7}}$$

3. The price elasticity of demand:
   A) measures the responsiveness of quantity demanded to a change in price.
   B) measures the responsiveness of price to a change in quantity demanded.
   C) measures the extent to which prices are flexible and respond to market forces.
   D) measures the responsiveness of demand when

price is held constant and demand increases or decreases.

4. Egg producers know that the elasticity of demand for eggs is 0.1. If they want to increase sales by 5%, they will have to lower price by:
   A) 0.1%
   B) 1%
   C) 5%
   D) 50%

5. The University chancellor believes that increasing student tuition by 5% will increase revenues. If the chancellor is correct that revenues will increase, then the tuition increase will reduce the number of students enrolling by:
   elacity > 1
   ΔQ% > ΔP%
   A) less than 5%.
   B) more than 5%.
   C) exactly 5%.
   D) 0%, there will be no change in the number of students enrolling.

6. Suppose the cross-price price elasticity of demand for butter and margarine is equal to 0.96 while for water and lemons it is –0.13. This means that butter and margarine are _____ while water and lemons are _____.
   complement : elasticity < 0
   substitute : elasticity > 0
   A) complements; substitutes
   B) substitutes; complements
   C) inelastic goods; elastic goods
   D) elastic goods; complements

7. Assume the price elasticity of demand for tobacco is

0.5, and the income elasticity of demand for tobacco is 0.4. Then:

A) an increase in the price of tobacco will decrease total revenue from sales of tobacco.
B) a 20% increase in the price of tobacco will decrease the quantity demanded of tobacco by 8%.
C) tobacco is an inferior good.
D) a 50% increase in income will increase the quantity demanded of tobacco by 20%.

8. Which of the following would be most likely to have a vertical supply curve?

A) salt
B) oil
C) insulin
D) paintings by Van Gogh

9. Suppose the price elasticity of demand for yachts equals 4.04, while the price elasticity of supply for yachts equals 0.22. If the National Assembly, in Quebec, reinstates a luxury tax on yachts, who will pay more of the tax?

A) Yacht builders will pay more.
B) Yacht buyers will pay more.
C) Yacht builders and buyers will pay equally.
D) It's impossible to tell without additional information.

10. Sarah has been told she has only one week to finish some pottery for a show. Sarah has exhausted her supply of clay and considers new clay absolutely necessary for finishing her products. For Sarah, the price elasticity of demand for new clay is elastic.

A) True
B) False

11. You are the manager of a supermarket, and know that the cross-price elasticity of peanut butter to jelly is exactly –2.0. Due to a bad grape harvest, grape jelly prices are expected to rise by 10% next year. Knowing this, you should stock 10% more peanut butter.
A) True
B) False

12. The income elasticity of demand for an inferior good, such as a macaroni and cheese dinner, is negative.
A) True
B) False

13. The price elasticity of the supply of paintings by Rembrandt is greater than 1.
A) True
B) False

14. If a demand curve is perfectly inelastic and supply is perfectly elastic, then the burden of an excise tax is borne entirely by producers.
A) True
B) False

15. What are the major determinants of price elasticity of demand?

Neccesity

Availabilities of substitute

Use those determinants and your own reasoning in judging whether demand for each of the following products is probably elastic or inelastic:

A) Bottled water (in Canada) elastic (not necessary)

B) Toothpaste inelastic (necessary)

C) Crest toothpaste elastic (A lot of substitutes)

D) Ketchup

E) Diamond bracelets elastic (luxury)

F) Internet service inelastic (necessary)

16. How would the following changes affect total revenue? Would total revenue increase, decrease, or remain unchanged?

A) Price falls and demand is elastic.

increase

B) Price falls and demand is inelastic.

decrease

C) Price falls and demand is unit elastic.

not change

D) Price rises and demand is elastic.

decrease

E) Price rises and demand is inelastic.

increase

F) Price rises and demand is unit elastic.

not change

17. The following table is a demand schedule. Fill in the columns for total revenue and price elasticity of demand (using the midpoint method).

Price	Quantity	Total revenue	Price Elasticity of Demand
6	1	6	
			3.67
5	2	10	
			1.8
4	3	12	
			1
3	4	12	
			0.56
2	5	10	
			0.27
1	6	6	
			0.08
0	7	0	

As the quantity increases, what happens to the price elasticity of demand?

price elasticity decrease

18. The price of good A decreases from $10 to $7, and as a result the quantity demanded of good B increases from 100 to 150.

A) What is the *cross price elasticity of demand*?

$$\frac{\frac{100-150}{100+150}}{\frac{10-7}{10+7}} = \frac{-\frac{1}{5}}{\frac{3}{17}} = -\frac{17}{15}$$

B) How would you characterize the relationship between goods A and B?

complement

19. The price of good A decreases from $20 to $16, and as a result the quantity demanded of good B decreases from 100 to 90.

A) What is the *cross price elasticity of demand*?

$$\frac{\frac{100-90}{100+90}}{\frac{20-16}{20+16}} = \frac{\frac{1}{19}}{\frac{1}{9}} = \frac{9}{19}$$

B) How would you characterize the relationship between goods A and B?

substitute

20. George's income has increased from $40,000 per year to $55,000 per year, and his quantity demanded for good X has increased from 42 to 80.

A) What is the *income elasticity of demand*?

$$\frac{\frac{80-42}{80+42}}{\frac{55000-40000}{55000+40000}} = \frac{\frac{38}{122}}{\frac{15000}{95000}} = \frac{\frac{19}{61}}{\frac{3}{19}} = \frac{19}{61} \cdot \frac{19}{3} = \frac{361}{183}$$

B) How would you characterize good X?

luxury good

21. George's income has increased from $40,000 per year to $55,000 per year, and his quantity demanded for good Y has decreased from 12 to 8.

A) What is the *income elasticity of demand*?

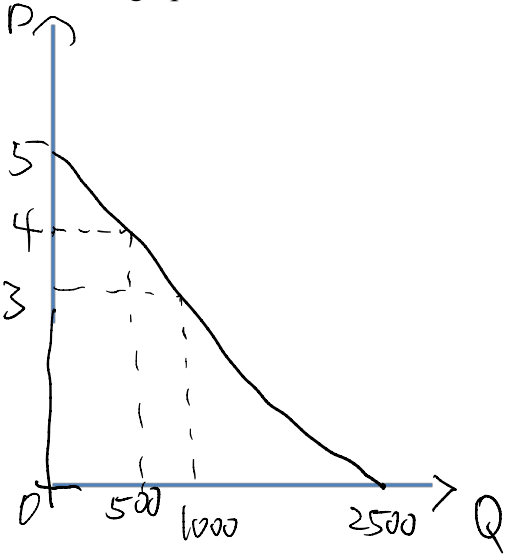
$$\frac{\frac{8-12}{8+12}}{\frac{55000-40000}{55000+40000}} = \frac{-\frac{1}{5}}{\frac{3}{19}} = -\frac{19}{15}$$

B) How would you characterize good Y?

inferior good

22. In the market for doughnuts, the demand function is P = 5 – 0.002Q.

A) If the price of doughnuts increases from $3 to $4 calculate the price effect and quantity effect and show on the graph below.

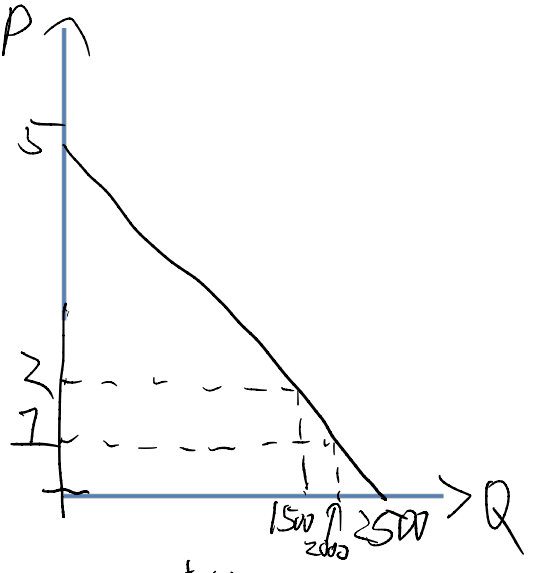


Price effect = $500 / _____

Quantity effect = $1500 / _____

Is demand price elastic, inelastic, or unit elastic in this range? elastic

B) If the price of doughnuts decreases from $2 to $1 calculate the price effect and quantity effect and show on the graph below.



Price effect = $1500

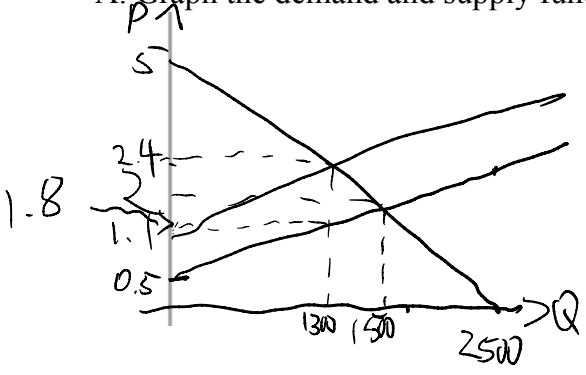
Quantity effect = $500

Is demand price elastic, inelastic, or unit elastic in this range?

inelastic

23. In the market for doughnuts, the demand function is P = 5 – 0.002Q and the supply function is P = 0.5 + 0.001Q.

A. Graph the demand and supply function.



B. Calculate the equilibrium price and quantity.

Q* = 1500

P* = $2

C. If the government imposes a tax of $0.60 per doughnut, calculate the consumer and producer tax incidence.

$.20 Consumer tax incidence =

$.60 Producer tax incidence =

D. Given the consumer tax incidence, is demand elastic or inelastic?

inelastic

E. Given the producer tax incidence, is supply

elastic or inelastic?

elastic

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