

PROBLEM SET # 4 (Elasticity) Answers
(CHP 5, Case, Fair and Oster)

1. The responsiveness of quantity demanded to price changes is known as the
 - a) consumer sensitivity index
 - b) producer responsiveness index
 - c) demand coefficient
 - d) **elasticity of demand**

2. Along any straight-line demand curve,
 - a) The price elasticity and slope vary
 - b) **The price elasticity varies, but the slope remains the same**
 - c) The slope varies, but the price elasticity remains the same
 - d) The price elasticity and the slope remains the same

3. If the units in which the quantity demanded is measured are changed (from kg to gr), then the price elasticity of demand will
 - a) decrease by a factor of 100
 - b) increase by a factor of 100
 - c) **be unaffected**
 - d) be unpredictable

4. A perfectly horizontal demand curve has a price elasticity of
 - a) one
 - b) **infinity**
 - c) zero
 - d) less than one

5. Moving down on a downward sloping straight – line demand curve, price elasticity is
 - a) constant
 - b) rising continuously.
 - c) **decreasing continuously.**
 - d) increasing to the midpoint of the demand curve and then decreasing.

6. If goods X and Y have a positive cross elasticity of demand, we know that
- a) they are substitutes.
 - b) they are complements.
 - c) they both have price elasticities greater than one.
 - d) they are both inferior goods.
7. A value of zero for the elasticity of supply suggests that
- a) there are few producers of the product.
 - b) the supply curve is horizontal.
 - c) supply is highly responsive to price.
 - d) there is no change in quantity supplied as price changes.
8. Marvin loves chocolate truffles. As the price of a chocolate truffle increases from \$1 to \$2 to \$3, Marvin continues to buy a dozen chocolate truffles every week. Marvin's demand for chocolate truffles is _____.
- a) elastic
 - b) perfectly inelastic
 - c) illustrated by a horizontal demand curve
 - d) unit elastic
9. Dan sells newspapers. Dan says that a 10 percent increase in the price of a newspaper will decrease the quantity of newspapers demanded by 8 percent. According to Dan, the demand for newspapers is _____.
- a) perfectly elastic
 - b) elastic
 - c) inelastic
 - d) unit elastic
10. When demand is _____, a decrease in price _____ total revenue.
- a) unit elastic; increases
 - b) elastic; decreases
 - c) elastic; increases
 - d) inelastic; increases
11. Blue pens and black pens are close substitutes. The cross elasticity of demand for black pens with respect to the price of blue pens is _____.
- a) equal to 1
 - b) zero
 - c) positive
 - d) negative

12. If the cross elasticity of demand between goods X and Y is positive and between goods X and Z is negative, then X and Y are _____ and X and Z are _____.

- a) price inelastic; complements
- b) price inelastic; income elastic
- c) **substitutes; complements**
- d) complements; substitutes

13. If the demand for a good is price-elastic, that good is likely to have

- a) many close complements.
- b) few close complements.
- c) **many close substitutes.**
- d) few close substitutes.

14. As Mary's income increases by 20 percent, her demand for tickets to National Hockey League games increases by 10 percent. Mary's demand for tickets is _____; for Mary, hockey tickets are _____ good.

- a) inelastic; an inferior
- b) elastic; a normal
- c) **inelastic; a normal**
- d) elastic; an inferior

15. The supply of lettuce in the short run will be _____ than the supply in the long run and _____ than the supply today.

- a) more elastic; more elastic
- b) less elastic; less elastic
- c) **less elastic; more elastic**
- d) more elastic; less elastic

16. The price elasticity of demand is equal to the _____ in the _____ divided by the _____ in the _____.

- a) change; price; change; quantity demanded
- b) percentage change; price; percentage change; quantity demanded
- c) change; quantity demanded; change; price
- d) **percentage change; quantity demanded; percentage change; price**

17. When the percentage change in quantity demanded is greater than the percentage change in price, the demand for the good is _____.

- a) unit elastic
- b) inelastic
- c) perfectly inelastic
- d) **elastic**

18. When the demand for a good is perfectly inelastic, _____.

- a) total revenue is as large as possible
- b) the price elasticity of demand is zero**
- c) the demand curve for the good is horizontal
- d) the price elasticity of demand is greater than 1

19. If the demand for a good is inelastic, the price elasticity of demand is _____.

- a) less than zero
- b) greater than 1
- c) equal to 1
- d) between 0 and 1**

20. If the demand for a good is perfectly elastic, the price elasticity of demand is _____ and the demand curve is _____.

- a) zero; vertical
- b) infinite; horizontal**
- c) infinite; vertical
- d) zero; horizontal

21. When the demand for a good is elastic and its price increases, the total revenue from the sale of the good will _____.

- a) increase initially and then decrease
- b) increase
- c) decrease**
- d) not change

22. Because toothpaste and toothbrushes are complements, the _____ elasticity of demand is _____.

- a) income; positive
- b) cross; negative**
- c) cross; positive
- d) income; negative

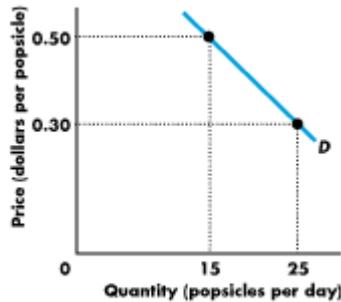
23. Haircuts and taxi rides are normal goods, so their _____.

- a) cross elasticity of demand is negative
- b) cross elasticity of demand is positive
- c) income elasticities of demand are negative
- d) income elasticities of demand are positive**

24. A luxury is a good or service with a demand that is _____ and a necessity is a good or service with a demand that is _____.

- a) cross inelastic; cross elastic
- b) income elastic; income inelastic**
- c) income inelastic; income elastic
- d) cross elastic; cross inelastic

25. The figure shows the demand curve for popsicles. The price elasticity of demand when the price of a popsicle increases from \$0.30 to \$0.50 is _____.



- a) 0
- b) 2
- c) 1/2
- d) 1**

26. Cola has more close substitutes than do soft drinks. The price elasticity of demand for cola is _____ the price elasticity of demand for soft drinks.

- a) greater than**
- b) a lot less than
- c) the same as
- d) less than

27. The price elasticity of demand for videos is 4. If the price of a video increased by 2 percent, the quantity demanded will _____.

- a) decrease by 8 percent**
- b) decrease by 0.5 percent
- c) increase by 8 percent
- d) decrease by 2 percent

28. Donuts and coffee are complements. When the price of a donut increases, the demand for coffee _____ and the cross elasticity of demand for coffee with respect to the price of a donut is _____.

- a) decreases; negative**
- b) increases; positive
- c) increases; negative
- d) decreases; positive

29. If when income increases by 15 percent increase and the price does not change the quantity of airplane travel demanded increases by 60 percent, then the income elasticity of demand of airplane travel is _____.

- a) 0
- b) Negative
- c) 4.00
- d) 0.25

30. The table gives some data on the supply of roses in a small town. When the price rises from \$15 a dozen to \$25 a dozen, the elasticity of supply is _____.

Price (dollars per dozen)	Quantity Supplied (dozens per day)
15	8
25	12

- a) 0.20
- b) 0.80
- c) 1.25
- d) 5.00

31. A decrease in the supply of sugar increases the price from \$0.95 a packet to \$1.05 a packet. The quantity decreases from 55 packets a day to 45 packets a day. The price elasticity of demand of sugar is _____.

- a) 2.0
- b) -0.5
- c) 0.5
- d) -2.0

32. If a 5 percent increase in the price of good A leads to a 4 percent decrease in the demand for good B, then _____.

- a) only one good is a normal good
- b) both goods are normal goods
- c) the goods are complements
- d) the goods are substitutes

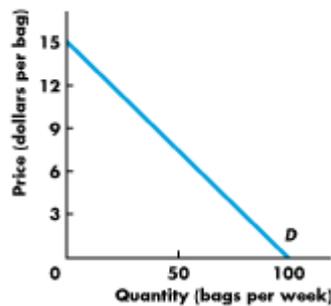
33. The income elasticity of demand of vacations is 5. If incomes increase by 3 percent next year, the quantity of vacations demanded at today's price will increase by _____ percent.

- a) 5/3
- b) 15
- c) 3
- d) 5

34. If a 10 percent change in the price of a good leads to a 5 percent change in the quantity supplied, then the supply of the good is _____ and the elasticity of supply is _____.

- a) elastic; -2.0
- b) inelastic; -0.5
- c) elastic; 2.0
- d) inelastic; 0.5**

35. The figure illustrates the demand for peanuts. If the price falls from \$12 to \$9 a bag, total revenue will _____, but if the price rises from \$3 to \$6 a bag, total revenue will _____.

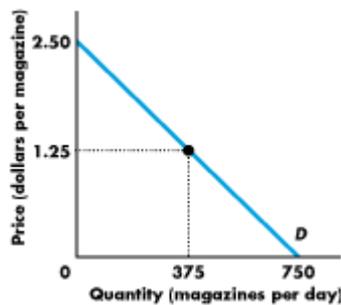


- a) increase; increase**
- b) decrease; decrease
- c) decrease; increase
- d) increase; decrease

36. When the price of hot dog is \$1.50 each, 500 hot dogs are sold every day. After lowering the price to \$1.35 each, 510 hot dogs are sold every day. At the original price, what is the price elasticity of demand for hot dog?

- a) 66.67
- b) 5
- c) 1
- d) 0.2**
- e) 0.015

37. The figure illustrates the demand for magazines. Newsagents will maximize their total revenue when they _____.



- a) sell 375 magazines a day**
- b) sell as many magazines as it can
- c) charge \$2.50 a magazine
- d) sell 750 magazines a day

38. Income levels rise by 10 percent, ceteris paribus, causing the quantity demanded for video rentals to go up by 4 percent. From this information, which one of the following is true?
- a. Video rentals are inferior goods.
 - b. The income elasticity of demand for video rentals is 2.5.
 - c. **Video rentals are normal goods.**
 - d. None of the above are true.
39. You are the sole producer of the new Volkswagen Beetle. Suppose the price that you are currently charging lands on the elastic portion of the linear demand curve for the Volkswagen Beetle. What should you do in order to maximize total sales revenue?
- a. Raise the price of the Volkswagen Beetle.
 - b. **Reduce the price of the Volkswagen Beetle.**
 - c. Produce and sell fewer Beetles.
 - d. Do nothing. Revenues are as high as they can be.
40. The responsiveness of quantity demanded for good M when the price of good N changes is measured by the
- a. price elasticity of demand.
 - b. income elasticity of demand.
 - c. price elasticity of supply.
 - d. **cross price elasticity of demand.**