

Principles of Microeconomics – Prof. Jepsen
Practice Problems for Elasticity

1. Suppose at a price of \$10 the quantity demanded is 100. When price falls to \$8, the quantity demanded increases to 130. The absolute value of the price elasticity of demand between the prices of \$10 and \$8 is approximately:
- A) 1.17.
 - B) 1.50.
 - C) 0.85.
 - D) 1.00.

Answer: A $(30/115)/(2/9) = (30/115)*(9/2) = 270/230$

2. A shirt manufacturer sold 10 dozen shirts per day when the price was \$4 per shirt but sold 15 dozen shirts per day when the price was \$3 per shirt. Hence, the absolute value of the price elasticity of demand is:
- A) greater than zero but less than 1.
 - B) equal to 1.
 - C) greater than 1 but less than 3.
 - D) greater than 3.

Answer: C $(5/12.5)/(1/3.5) = (5/12.5)*(3.5/1) = 17.5/12.5 > 1$ (but less than 3)

3. Along the upper half of a linear demand curve, the price elasticity of demand will be:
- A) price inelastic.
 - B) price elastic.
 - C) unit price elastic.
 - D) positive.

Answer: B See graph on page 97.

4. The absolute value of the price elasticity of demand for gasoline in the long run has been estimated to be 1.5. If an extended war in the Middle-East caused the price of oil (from which gasoline is made) to increase and remain high for a decade, how would that affect total expenditures on gasoline in the long run, all other things unchanged?
- A) total expenditures would rise
 - B) total expenditures would fall
 - C) total expenditures would remain unchanged
 - D) not enough information is given to answer the question

Answer: B

Notice that demand is price ELASTIC ($1.5 > 1$) in the long run, so an increase in price will decrease total revenue/expenditure.

5. The *Northern Iowan* reports that when UNI women's volleyball ticket prices increased by 10 percent, the number of fans attending the volleyball games fell by 15 percent. *Ceteris paribus*, what is the absolute value of the implied price elasticity of demand for volleyball tickets?
- A) 0.10
 - B) 0.15
 - C) 1.5
 - D) Without specific price and quantity changes, the elasticity cannot be determined.

Answer: C $\% \text{ change in } Q / \% \text{ change in } P = 15/10 = 1.5$