

Math 1314
Homework 10

Enter your answers in the EMCF titled "Homework 10" at casa.uh.edu before the due date/time. In the problem numbers given below, Problem 4.2 26 refers to Chapter 4, Section 2, Problem 26. The problems can be found in the online text.

1. Which of these statements is true?

- A. If price increases and revenue decreases, then demand is inelastic.
- B. If price increases and revenue increases, then demand is inelastic.
- C. If price decreases and revenue increases, then demand is inelastic.
- D. If price increases and there is no change to revenue, then demand is inelastic.

2. Suppose $E(p) = 2$ when price is \$150. Demand is

- A. unitary
- B. inelastic
- C. elastic

3. Suppose $E(p) = \frac{1}{5}$ when price is \$150. Which of these statements is true?

- A. A 1% increase in price causes no change in revenue.
- B. A 1% increase in price causes a 5% increase in revenue.
- C. A 1% increase in price causes a 5% decrease in revenue.
- D. A 1% increase in price causes a 0.2% decrease in revenue.
- E. A 1% increase in price causes a 0.2% increase in revenue

Work the problems listed below. Round answers to four decimal places. Match your answers with the answers given in the answer bank below. Answers in the answer bank may be used more than once or not at all.

4. Problem 4.2.56, find $E(p)$

5. Problem 4.2.56, is demand elastic, inelastic or unitary?

6. Problem 4.2.60, find $E(p)$

7. Problem 4.2.60, is demand elastic, inelastic or unitary?

- | | | | |
|------------|--------------|-------------------------|------------|
| A. \$274 | B. \$625 | C. unitary | D. 2.4 |
| E. \$21250 | F. 0.8889 | G. \$0.5 | H. elastic |
| I. 1 | J. inelastic | K. answer is not listed | |

Suppose a demand function is given by $p = 350 - 0.2x$. Use this demand function to answer questions 8 – 10.

8. Solve the demand function for x .

- | | | |
|----------------|---------------|-------------------------|
| A. $700 - p$ | B. $700 - 5p$ | C. $350 - p$ |
| D. $1750 - 5p$ | E. $175 - 5p$ | F. answer is not listed |

9. Find $E(p)$ when the price is \$150.

- | | | |
|--------|--------|-------------------------|
| A. 2.0 | B. 0.5 | C. 0.75 |
| D. 1.5 | E. 1 | F. answer is not listed |

10. When price is \$150, demand is

- | | | |
|--------------|------------|------------|
| A. Inelastic | B. Elastic | C. Unitary |
|--------------|------------|------------|