

Determining Elasticity

Class Activity

DETERMINANTS OF ELASTICITY

The table below lists the characteristics of an item that is elastic (first column) and the characteristics of an item that is inelastic (second column). In the problems that follow, first identify whether the item is elastic or inelastic. Then, write down the letter(s) from the table that lists the proper explanation.

Elastic Items	Inelastic Items
A) Substitutes exist and are readily available.	E) Substitutes are hard to find or may not exist.
B) The item represents a large portion of a person's income.	F) The item is a small portion of a person's income.
C) The item is a luxury.	G) The item is a necessity.
D) Consumers have a lot of time to adjust to a change in price.	H) Consumers have little time to adjust to a change in price.

1) Insulin

- a) Is this item elastic, or is it inelastic? _____
- b) How do you know? _____

2) Salt

- a) Is this item elastic, or is it inelastic? _____
- b) How do you know? _____

3) Salt at One of Four Stores in a Shopping Mall

- a) Is this item elastic, or is it inelastic? _____
- b) How do you know? _____

4) Cup of Coffee One Day after a 50% Price Increase

- a) Is this item elastic, or is it inelastic? _____
- b) How do you know? _____

5) Cup of Coffee One Year after a 50% Price Increase

- a) Is this item elastic, or is it inelastic? _____
- b) How do you know? _____

6) Gasoline

- a) Is this item elastic, or is it inelastic? _____
- b) How do you know? _____

7) Meal at a Sit-Down Restaurant

- a) Is this item elastic, or is it inelastic? _____
- b) How do you know? _____

8) Diamond Rings

- a) Is this item elastic, or is it inelastic? _____
- b) How do you know? _____

THE PRICE ELASTICITY OF DEMAND

Use the formula for the price elasticity of demand to solve these problems. Remember, coefficients below 1 are inelastic; coefficients equal to 1 are unit elastic; and coefficients greater than 1 are elastic.

9) When the price is \$4, 21 units are demanded. When the price increases to \$6, the quantity demanded decreases to 19 units. What is the coefficient of elasticity, and is this item elastic, inelastic, or unit elastic?

Coefficient of Elasticity: _____

Elastic/Inelastic/Unit Elastic: _____

$\text{Price Elasticity of Demand} = \frac{\frac{Q_2 - Q_1}{(Q_1 + Q_2) / 2}}{\frac{P_2 - P_1}{(P_1 + P_2) / 2}}$

10) When the price is \$9, 120 units are demanded. When the price decreases to \$7, the quantity demanded increases to 200 units. What is the coefficient of elasticity, and is this item elastic, inelastic, or unit elastic?

Coefficient of Elasticity: _____

Elastic/Inelastic/Unit Elastic: _____

TOTAL REVENUE TEST

Use the Total Revenue Test to solve these problems. Remember, if total revenue moves in the same direction as price, it is inelastic; if total revenue stays the same, it is unit elastic; and if total revenue moves in the opposite direction as price, it is elastic.

11) When the price is \$2.50, 10 units are demanded. When the price increases to \$3, the quantity demanded decreases to 9 units. Is demand elastic, inelastic, or unit elastic?

Elastic/Inelastic/Unit Elastic: _____

12) When the price is \$30, 10 units are demanded. When the price decreases to \$25, the quantity demanded increases to 15 units. Is demand elastic, inelastic, or unit elastic?

Elastic/Inelastic/Unit Elastic: _____

13) When the price is \$6, 80 units are demanded. When the price increases to \$8, the quantity demanded decreases to 60 units. Is demand elastic, inelastic, or unit elastic?

Elastic/Inelastic/Unit Elastic: _____