Worksheet 5D

**Measuring price elasticity of demand using the PEoD formula and the Total Revenue Test.**

**Scenario 1:**

A local school sells bottled iced tea in the school store. The drink has been so popular with the teachers and students that the store manager decides to raise the price to increase profits. At $1.25 per bottle, the store sold 6,000 bottles per week, after raising the price to $1.50 per bottle, sales decreased to 4,000 bottles per week.

I. Using the following formula to calculate the price elasticity of demand (PEoD) for the iced tea:

**PEoD = (% change in quantity demanded/% change in price)**

* Based on the formula result, is demand for the iced tea elastic, unitary elastic or inelastic?

II. Complete the table below and use the revenue test to determine the price elasticity of demand.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Price per Bottle | Quantity Sold | Total Revenue |
| Week 1 |  |  |  |
| Week 2 |  |  |  |

* Based on the change in total revenue, is demand for the iced tea elastic, unitary elastic or inelastic?

**Scenario 2:**

A private company operates a ferry service that transports commuters from Staten Island to Manhattan in approximately 10 minutes, which is less than half the time it takes for normal ferry service. The company charges $5 per trip and has been serving an average of 6,000 passengers per day. In an attempt to increase profits, the management of the company decides to raise the price of to $6 per trip. After the increase, ridership decreases to an average of 4,000 passengers per day.

I. Using the following formula to calculate the price elasticity of demand (PEoD) for the ferry service:

**PEoD = (% change in quantity demanded/% change in price)**

* Based on the formula result, is demand for the ferry service elastic, unitary elastic or inelastic?

II. Complete the table below and use the revenue test to determine the price elasticity of demand.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Price per Ride | Quantity Sold | Total Revenue |
| Week 1 |  |  |  |
| Week 2 |  |  |  |

* Based on the change in total revenue, is demand for the ferry service elastic, unitary elastic or inelastic?