**Price Elasticity of Demand – Revision Sheet**

*“The responsiveness of Demand to a change in Price.”*

* Price Elastic Demand means the percentage change in demand is greater than the percentage change in price.
* Price Inelastic Demand means the percentage change in demand is less than the percentage change in price.

**Calculating Price Elasticity of Demand**

$$Price Elasticity of Demand= \frac{Percentage Change in Demand}{Percentage Change in Price}$$

**Things to Remember**

PED is always a **negative** figure.

If PED > -1, it is **relatively** **elastic**. For revenue to increase **price should fall**.

If PED < -1, it is **relatively** **inelastic**. To increase revenue, **increase your** **price**.

If PED = 0, it is **perfectly inelastic/zero elasticity**. Prices can rise and revenue will increase.

If PED = ∞, it is **perfectly/infinitely elastic**. A rise in price will result in no revenue.

If PED = -1, it is **unitary**. Revenue will **stay the same** whether price increases or decreases.

The key influence PED is the number of close **substitutes** (substitutability).

**How to Calculate Percentage Change**

$$Percentage Change= \frac{Difference}{Original} x 100$$

**Notes on Price Elasticity of Demand**

* Your exam board may ask, *“Why is a knowledge of Price Elasticity of Demand useful?”* The simple answer is it helps entrepreneurs know whether they should increase their price or not.
* Products are more likely to have Price Elastic Demand if they have many substitutes.
* It is incorrect to say that products that are highly branded are Price Inelastic. Coke has the highest brand value in the world; however, it probably has Price Elastic Demand, if they increase their price; many, many people would switch to buying Pepsi.

**Calculation Practice**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Product A** | **Product B** | **Product C** | **Product D** |
| **Original Conditions** | **Quantity Demanded** | 100 | 20 | 80 | 200 |
| **Price** | $20 | $50 | $30 | $45 |
| **Total Revenue** |  |  |  |  |
| **New Conditions** | **Quantity Demanded** | 120 | 10 | 88 | 180 |
| **Price** | $19 | $55 | $25 | $60 |
| **Total Revenue** |  |  |  |  |
| **Calculations** | **Percentage Change in Quantity Demanded** |  |  |  |  |
| **Percentage Change in Price** |  |  |  |  |
| **Price Elasticity of Demand** |  |  |  |  |
| **Price Elastic or Price Inelastic?** |  |  |  |  |
| **Change in Revenue** |  |  |  |  |

**Summary (fill in the blanks)**

* If you have a product with Price Elastic Demand, you should \_\_\_\_\_\_\_ your price to maximise your Total Revenue.
* If you have a product with Price Inelastic Demand, you should \_\_\_\_\_\_\_ your price to maximise your Total Revenue.

## 1. What is the correct formula for price elasticity of demand?

## Change in price / change in quantity demanded.

## % change in price / % change in quantity demanded

## Change in quantity demanded / change in price

## % Change in quantity demanded / % change in price

## 2. What is the correct definition for price elasticity of demand?

## A. When price increases, demand falls.

## B. When price increases, demand increases.

## C. The responsiveness of demand to a change in price.

## D. The responsiveness of prices to a change in demand.

## 3. Demand is price elastic when…

## A. Prices increase a lot.

## B. There are a lot of substitute products.

## C. Manufacturers face increasing costs.

## D. There is a recession.

## 4. Demand is price inelastic when…

## A. There is a strong brand image.

## B. There are a lot of substitutes.

## C. There is an economic boom.

## D. The costs of manufacture are reduced.

## 5. For which of the following items and coefficients will an increase in price result in an increase in revenue?

## A. A washing machine, - 2.0

## B. A television, -0.5

## C. A mobile phone, -1.0

## D. Salt, -0.1

## 6. If the price of a book was £15, but it is discounted in the sale to £11, what is the percentage change in price?

## A. -26.7%

## B. -36.4%

## C. -73.3%

## D. -63.3%

## 7. If the price of a good changes from £5 to £4 and demand change from 100 to 120 units, the PED will be...

## A. -0.25

## B. -1.0

## C. -0.2

## D. -2.0

## 8. A chocolate bar changes from 40 to 30 pence and demand changes from 1000 to 1500, the PED will be…

## A. –0.25

## B. -0.5

## C. -0.2

## D. -2.0

## 9. What is the price elasticity of demand if the price of a games console is reduced from £100 to £94 and demand goes from 4000 units to 4480 units?

## A. -80

## B. -0.5

## C. -1

## D. -2