Price elasticity of demand

- **The objectives of today's lesson are as follows.**

1. To understand what is meant by the term **price elasticity of demand**.
2. To enable you to **calculate** the price elasticity of demand for different products.
3. To understand the link between **price elasticity and revenue**.

The Law of Demand

Before we discuss price elasticity of demand it is necessary to clear up a common area of confusion for students namely the difference between the law of demand and price elasticity of demand.

The law of demand states:

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Price elasticity of demand

Price elasticity of demand on the other hand or P.E.D. measures the

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Task One

Consider the list of products below. You have to state the extent to which demand would fall in response to a **10% increase in price.** You can describe the fall in demand as. (Estimate as best you can)

very small ,	**<5%,**
small,	**5%.**
Proportionate,	**10%**
Large	**15-20%**
Very Large	**20%**

Product	Extent of fall in demand/reason
	
	
	
	
 	
	

	
	
	
	
 	

- Generally speaking a 10% increase in price of what **type** of good would lead to less than proportionate (i.e. small or very small) fall in demand?

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- A 10% increase in price of what **type** of good would lead to a more than proportionate (i.e. large or very large) fall in demand?

_____

The reverse situation would be true if there were a 10% decrease in the price of a product

- Demand for a product/service is described as _____if an increase or decrease in price results in a **more than proportionate** change in demand.

- Demand for a product/service is described as _____if an increase or decrease in price results in a **less than proportionate** change in demand.

2. Price elasticity of demand is calculated using the following formula

Percentage change in quantity demanded
Percentage change in price.

OR

Change in quantity demanded / Original quantity demanded × 100
Change in price / Original price × 100

For the following percentage changes in demand as a result of a the stated % change in price calculate the price elasticity of demand.

Task Two

Change in price (%)	Change in quantity demanded (%)	Price elasticity of demand
20	40	
10	5	
15	15	
30	15	

Task Three

- **The price of the Consoles increases from £50 to £60. Demand falls from 100,000 units to 60,000 units.**

  a) Calculate the price elasticity of demand for the Consoles.

  b) Is the demand for Consoles price elastic or price inelastic?

  c) What has happened to revenue as a result of the increase in price?

- **Bread in the supermarket falls in price from 40p a loaf to 35p a loaf. Quantity Demanded for bread increases from 200,000 units to 210,000 units.**

  a) Calculate the price elasticity of demand for Bread.

  d) Is the demand for bread price elastic or inelastic?

  c) What has happened to revenue as a result of the fall in price?

- **Repeat the above steps for petrol when it increases in price from 80p to 90p and quantity demanded decreases from 500,000 units to 480,000.**

- **Bars of chocolate falls in price from 35p to 30p. Quantity demanded increases from 100m units to 150m units.**

Task Four

- You need to be able to understand what happens to total revenue when a price change leads to a subsequent change in demand. Using the information from the last four examples fill in the table below.

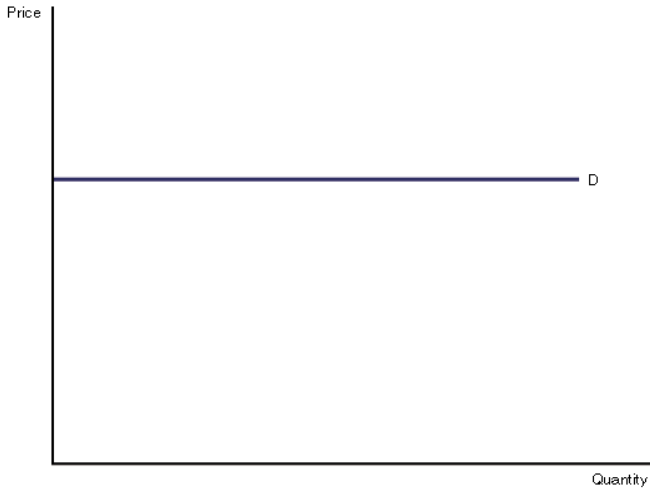
- **In the box write what happens to total revenue**

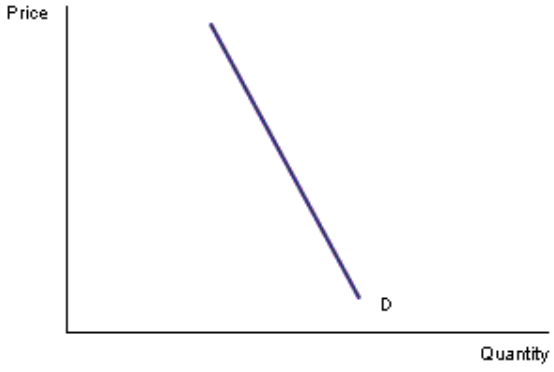
	There is an **increase** in price	There is a **decrease** in the price
Demand for the product is **price elastic**		
Demand for the product is **price inelastic**		

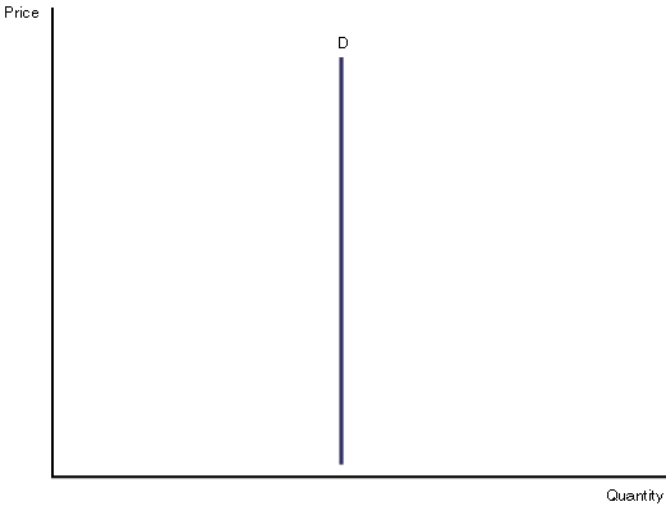
Task Five

Match the following descriptions to the correct diagram below.

- Price elastic demand
- Price inelastic demand
- Perfectly price elastic demand
- Perfectly price inelastic demand
- Unitary price elasticity of demand







Price Elasticity of Demand – Lesson 2

- **Review of how to calculate Price Elasticity of Demand.**
- **Representing revenue changes on a demand curve for products with different elasticities.**
- **Looking at the factors that affect the price elasticity of demand for a product.**
- **Examining how price elasticity changes over the length of the demand curve.**

Task One

- Answer the question below.

	Original Values			New Values	
	Qd	Price ($)		Qd	Price ($)
a)	200	10		240	6
b)	40	16		50	14
c)	24	6		32	0
d)	300	24		400	20
e)	90	12		90	16
f)	64	48		80	4

- Calculate the price elasticity of demand for the data in the table above.

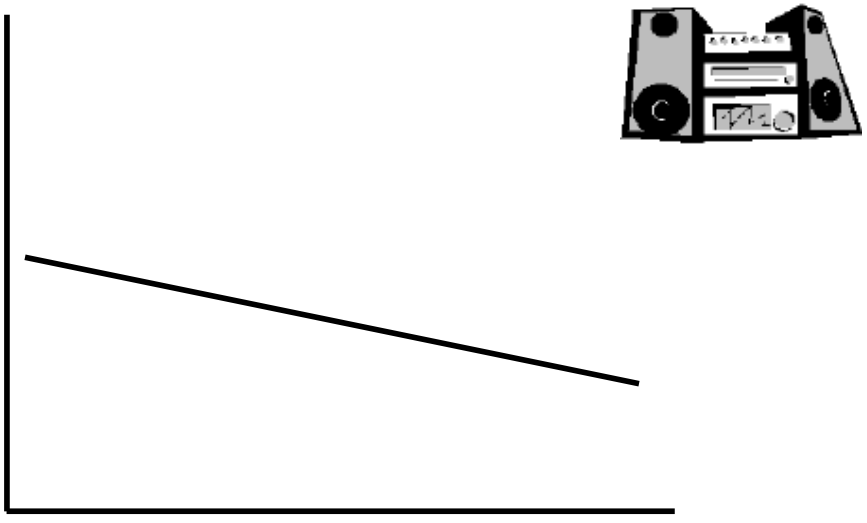
Task Two

Indicate on the diagram below the changes in revenue following an **increase in price**.

a) Overall change in revenue following a price increase? **(elastic/inelastic)**

_____

b)



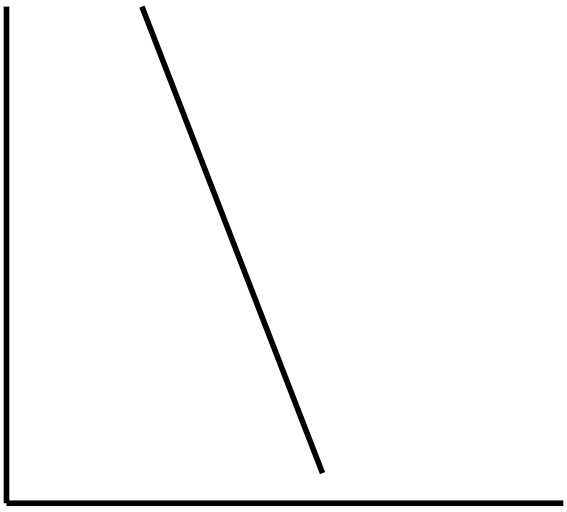
c) Overall change in revenue following a price increase **(elastic/inelastic)**?

_____

Task Three

Indicate what will happen to revenue following a **fall in price**.

d) **Price**



Quantity Demanded

e) Overall change in revenue following **a price fall**. (elastic/inelastic)

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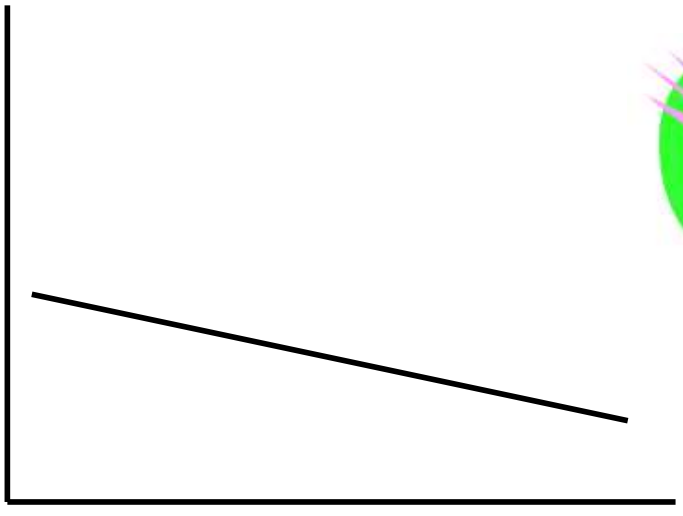
f)

Price



Quantity Demanded

g) What is the **overall change** in revenue? (elastic/inelastic)

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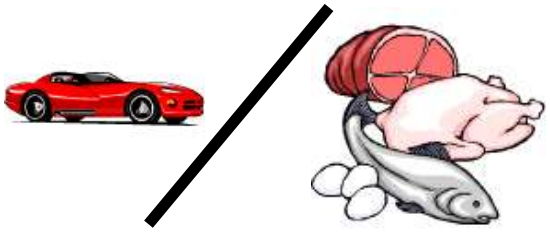
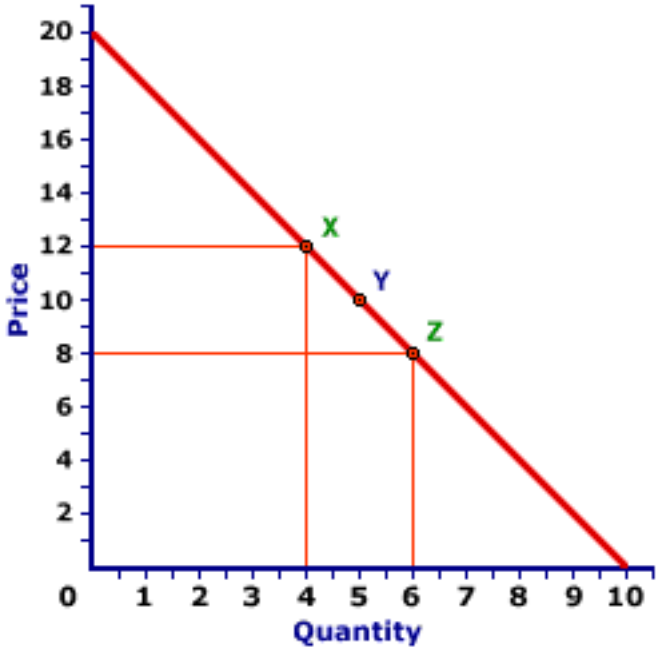
Task Four

- We now need to consider the factors that effect whether demand for a product will be elastic or inelastic.

Factor	Explanation
	
	
	
	
	

Task Five

- Calculate the price elasticity of demand using the diagram below if there is a fall in price from $12 to $8.



Task Six

- Look at the demand curve below.

h) If the price falls from **$100 to $90**, what is the increase in quantity demanded?

i) Calculate the Price Elasticity of Demand following this change in price

j) Now assume that price increases from **$0 to $1**. What is the change in quantity demanded?

k) Calculate the price elasticity of demand following this price change.

l) Label the diagram on the next page showing how the price elasticity of demand **changes** as you move down the demand curve.