



# Micro Tutorial

Jan 29th 2021

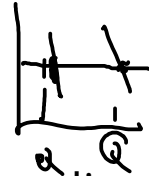


# Topics Covered

1. Elasticity demand
2. Elasticity supply

# What is Elasticity

elastic



Perfect Elastic: As the price changes, the demand change accordingly.

Example: Honeycrisp Apples price increase, people start buying Gala Apples.

Inelastic: As the price changes, the demand does not change.

Example: Water, cigarettes

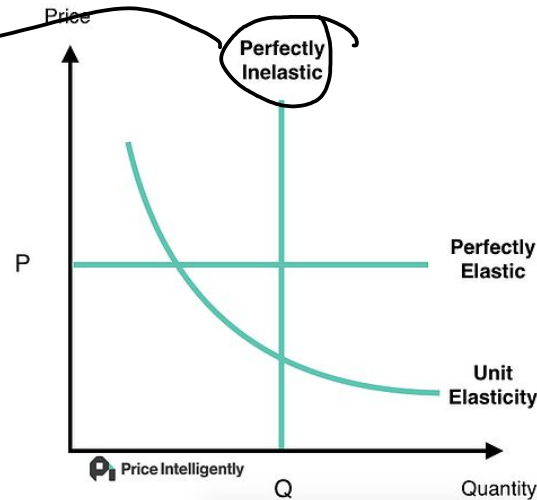
# Question 1

$$\text{inelastic} < \underset{\substack{\uparrow \\ \text{unitary}}}{1} < \text{elastic}$$

Categorize into elastic, inelastic, unitary elastic calculate the expected change in quantity after a 10% increase in price for the following demand elasticity values:

- a) 0
- b) 0.6
- c) 1
- d) 2.5

inelastic



# Question 1

Categorize into elastic, inelastic, unitary elastic calculate the expected change in quantity after a 10% increase in price for the following demand elasticity values:

- a) No change in quantity - perfectly inelastic
- b) 6% drop in quantity - inelastic
- c) 10% drop in quantity - unitary elastic
- d) 25% drop in quantity - elastic

# Question 2

What would happen to total revenue of a firm in the cases above?

## Question 2

$$P \uparrow \quad Q \downarrow, \quad TR = ?$$

What would happen to total revenue of a firm in the cases above?

Total Revenue =  $P \cdot Q$

$$TR = P \cdot Q$$

- a) 0
- b) 0.6
- c) 1
- d) 2.5

# Question 2

1 for 1

What would happen to total revenue of a firm in the cases above?

Total Revenue =  $P \cdot Q$

- a) If price increases and quantity does not change, TR increases.
- b) TR increases because increase in price offsets drop in quantity
- c) TR remains constant
- d) TR falls

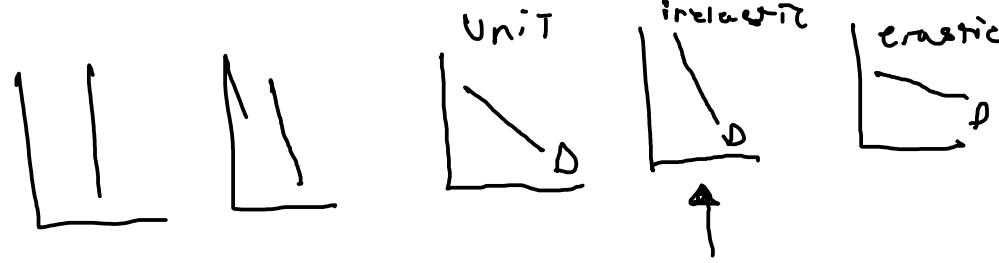
$P \uparrow, Q \sim$   
 $P \uparrow \uparrow, Q \downarrow$   
 $P \uparrow, Q \downarrow$   
 $P \uparrow, Q \downarrow \downarrow$



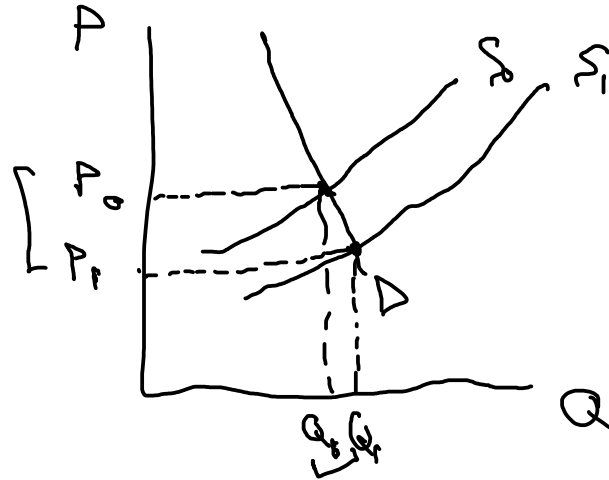
# Question 3

1. Draw Graph.  
2. do Shift

3. of Result



Farmers have a relatively inelastic demand for their crops. Suppose there is an unusually large harvest in a particular year. How would you expect this to affect the incomes of the farmers?



$S \uparrow$

$\downarrow TR = P \cdot Q$

$\downarrow \uparrow$

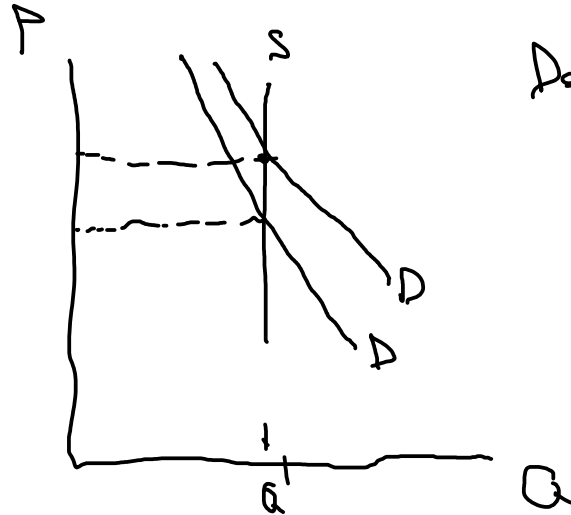
# Question 3

An unusually large harvest shifts supply to the right, pushing price down and quantity up. Because demand is inelastic, the drop in price will be larger than the increase in quantity, decreasing total revenue for farmers.

# Question 4

Fixed supply = Perfect inelastic supply  
no sub = Demand inelastic

Assume that the university parking lot has 20,000 parking spaces. What do you think the price elasticity of supply would be like? What do you think the price elasticity of demand would be? Explain how the university can use this information to set parking fees.



Demand inelastic

# Question 4

Because the supply of parking spaces is fixed, supply is perfectly inelastic. Demand is also inelastic because of the lack of substitutes. This provides incentives for the university to charge high prices for parking.

## Question 5

$$P_1 = 2.25$$

$$Q_1 = 500,000$$

$$P_2 = 2.75$$

$$Q_2 = 490,000$$

Suppose that you are hired as a consultant for the Toronto Transit Commission (TTC). The data show that, at the current fare of \$2.25, the system carries 500,000 riders per day. Data also indicate that, for each \$0.50 increase in fare, rides decrease by 1000 per day. What is the price elasticity of demand if the fare is increased by \$0.50? Do you think that the situation will remain the same over the long term? Explain. What advice would you give to the TTC?

$$\frac{\frac{\Delta Q}{Q_2}}{\frac{\Delta P}{P_1}} =$$

$$\frac{\Delta Q}{Q_2} = \frac{Q_2 - Q_1}{Q_2} = \frac{499000 - 500000}{499000}$$

$$\frac{\Delta P}{P_2} = \frac{P_2 - P_1}{P_2} = \frac{2.75 - 2.25}{2.75}$$

$$\epsilon = 0.1$$

inelastic  $< 1 <$  elastic

$$0.1 < 1$$

# Question 6

From the following pairs of goods, which one will have a more elastic demand and why?

- a) Required textbooks or mystery novels
- b) Beethoven recordings or classical music recordings in general
- c) Heating oil during the next 6 months or during the next 5 years
- d) Beer or water

# Question 6

From the following pairs of goods, which one will have a more elastic demand and why?

- a) Mystery novels. Because they are not required and because you can buy any mystery novel, while you have to buy the exact required textbook.
- b) Beethoven recordings. This is a more narrowly defined market.
- c) During the next 5 years. The demand is measured over a longer time period
- d) Beer. Relative to water, beer is a luxury good not a necessity.