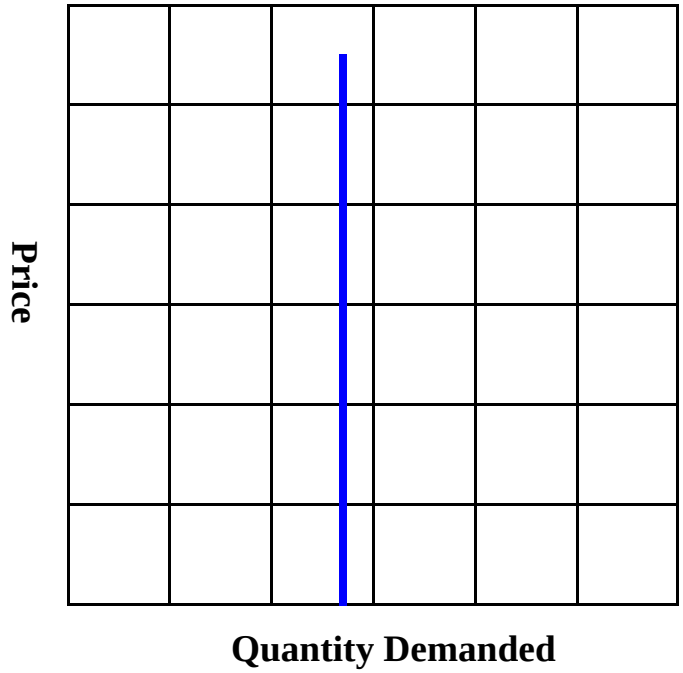
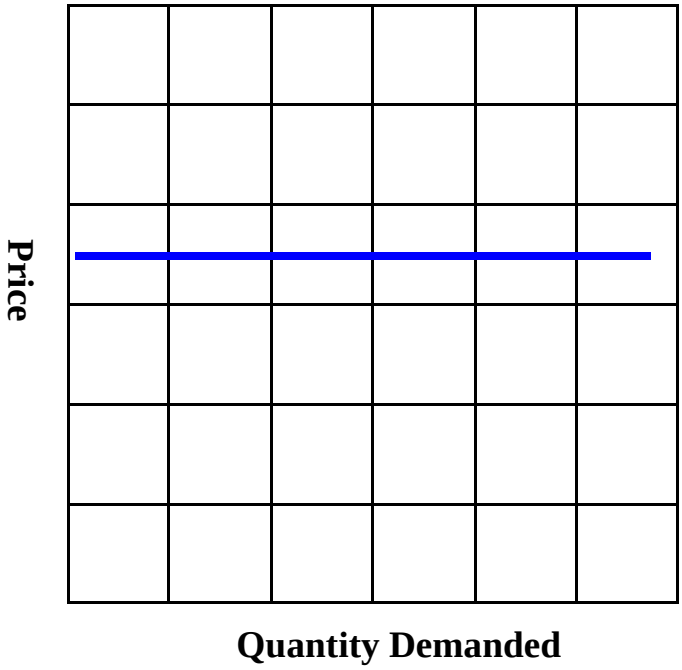
Price Elasticity of Demand

Definition: a measure of the responsiveness of the quantity demanded to a change in price.

Can you explain what these two graphs show?





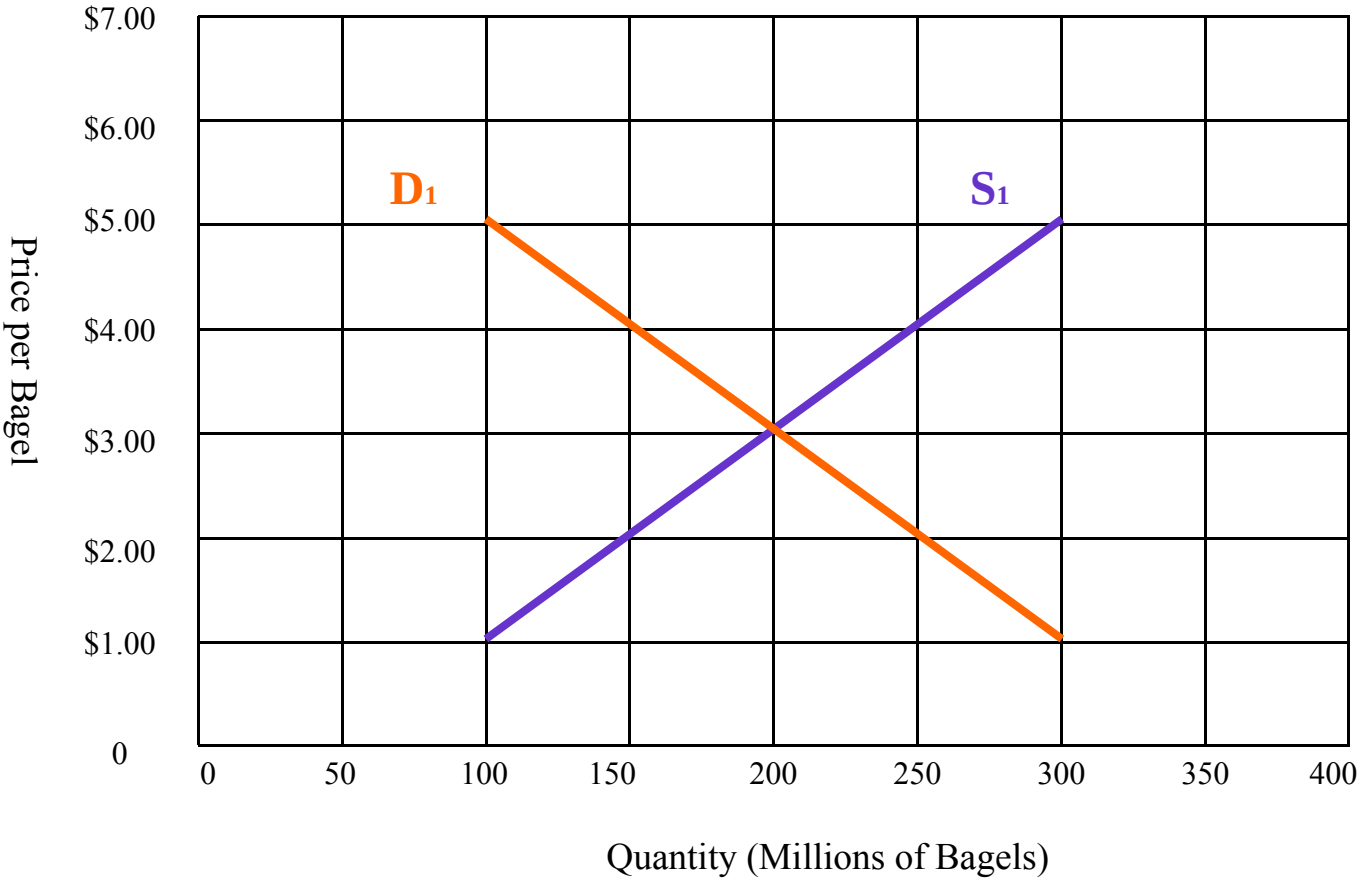
$$\text{Price Elasticity of Demand} = \left| \frac{\text{\% change in quantity demanded}}{\text{\% change in price}} \right|$$

$$\text{Percent change} = \left(\frac{\text{New value - Base value}}{\text{Base value}} \right) \text{X } 100$$

Effects of Price Change on Revenues

Elasticity value	Description	Effect of price increase	Effect of price decrease
$e = 0$	Perfectly inelastic	Increase	Decrease
$0 < e < 1$	Inelastic	Increase	Decrease
$e = 1$	Unit elastic	No Change	No Change
$1 < e < \infty$	Elastic	Decrease	Increase
∞	Perfectly elastic	Revenues fall to 0	Decrease

Bagel Example - Elasticity



You can use the supply and demand schedule below to calculate the elasticity of demand for bagels.

Demand for and Supply of Bagels

Price ($ per bagel)	Quantity Demanded (millions of bagels)	Quant0ities Supplied (millio200ns of bagels)
$1.00	300	100
$2.00	250	150
$3.00	200	200
$4.00	150	250
$5.00	100	300

A. What is the elasticity of demand to a drop in price from $3 to $1? _____

B. What is the elasticity of demand to a rise in price from $1 to $3? _____

C. What is the elasticity of demand to rise in price from $4 to $5? _____