



1. Input:

New chat



MO

How does the price elasticity of demand behave along a linear demand curve that runs from the x-axis to the y-axis?



2. Output ChatGPT:

Along a linear demand curve that runs from the x-axis to the y-axis, the price elasticity of demand varies along the curve.

At the top of the demand curve, where price is high and quantity demanded is low, the demand is relatively elastic because consumers have more alternatives to choose from and are more sensitive to changes in price.

As we move down the demand curve, toward the midpoint, the price elasticity of demand decreases, meaning that demand becomes less sensitive to changes in price. This is because consumers have fewer substitutes available, so they are less likely to switch to a different product when the price changes.

At the bottom of the demand curve, where price is low and quantity demanded is high, the demand is relatively inelastic because consumers have fewer alternatives to choose from and are less sensitive to changes in price. In this case, even if the price of the product increases, consumers may continue to purchase it because they have few alternative options.

Overall, the price elasticity of demand along a linear demand curve that runs from the x-axis to the y-axis varies from relatively elastic at the top to relatively inelastic at the bottom.

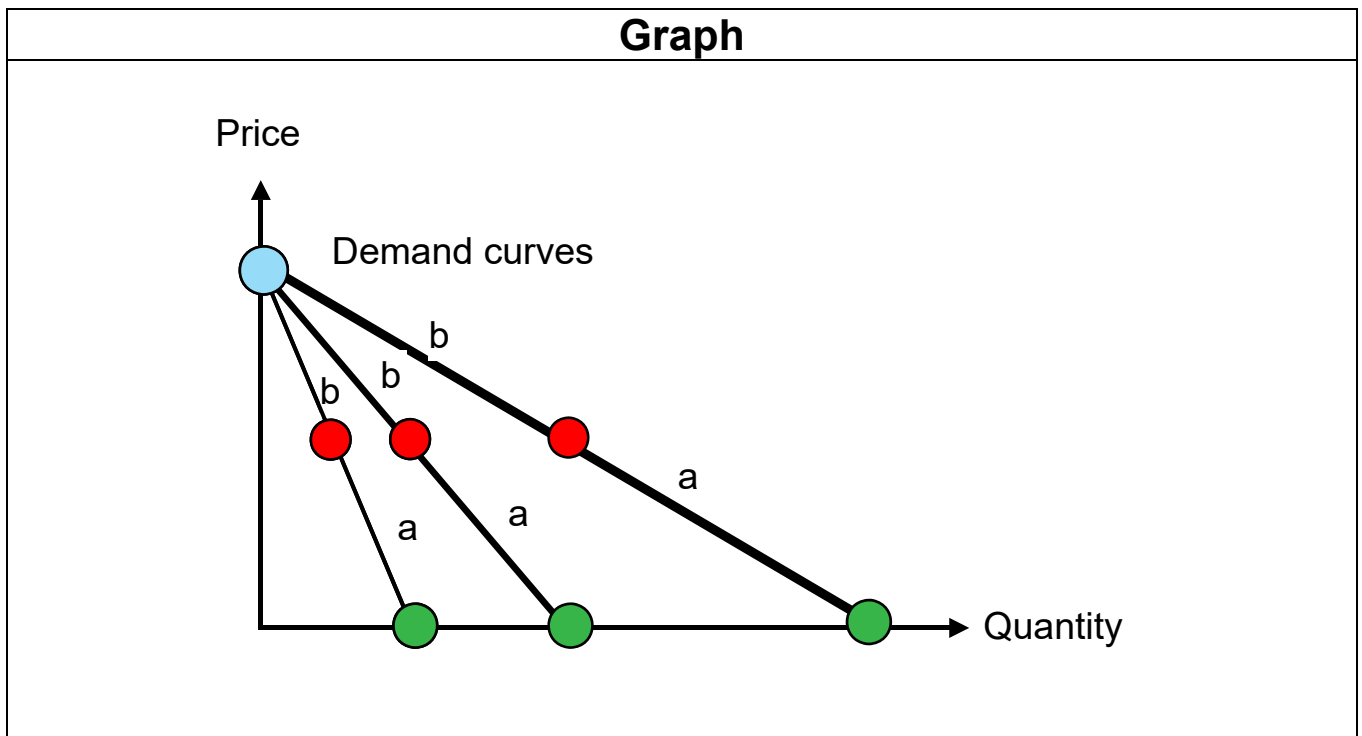


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3. **Graph** about price elasticity of demand along a linear demand curve



Price elasticity of demand (e) = a/b , therefore,

● $e = 0$

● $e = 1$

● $e = \text{infinite}$

Result:

For any linear demand curve from axis to axis, the price elasticity takes the values from 0 to infinity when starting at the bottom. When starting at the top, it is the opposite. The slope does not matter for this characteristic.

Or put another way:

Price elasticity of demand (e) = $\Delta Q/Q : \Delta P/P = \Delta Q/\Delta P * P/Q$

● $P = 0 \rightarrow P/Q = 0 \rightarrow e = \Delta Q/\Delta P * P/Q \rightarrow e = \Delta Q/\Delta P * 0 \rightarrow e = 0$

● $Q = 0 \rightarrow P/Q = \text{infinite} \rightarrow e = \Delta Q/\Delta P * P/Q \rightarrow e = \Delta Q/\Delta P * \text{infinite} \rightarrow e = \text{infinite}$