

$$e_{p^d} = \frac{\% \text{ change in } Q^d}{\% \text{ change in Price}}$$

ed =

p

Change in Q_d Average Quantity

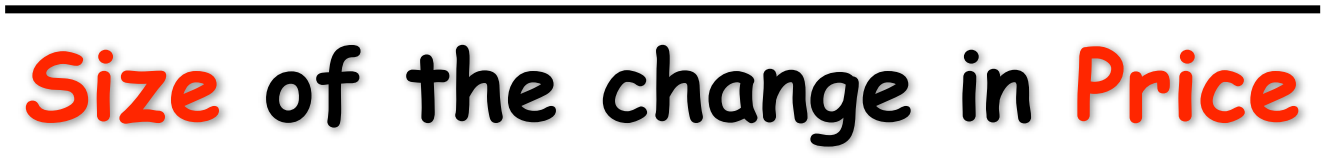
Change in Price Average Price







Size of the change in Q_d



Size of the change in Price

ed =

p



Price

Demand



Formula to calculate the elasticity

Formula to calculate the **price** elasticity of
demand

The Midpoint Formula







Price

Formula to calculate the **price** elasticity of demand

Demand \swarrow

Price \nwarrow

$$e_{p^d} = \frac{\text{Size of the change in } Q^d}{\text{Size of the change in Price}}$$

$$e_{p^d} = \frac{\text{Change in } Q^d \div \text{Average Quantity}}{\text{Change in Price} \div \text{Average Price}}$$

$$e_{p^d} = \frac{\begin{matrix} \% \Delta Q^d \\ \% \text{ change in } Q^d \end{matrix}}{\begin{matrix} \% \Delta \text{ Price} \\ \% \text{ change in Price} \end{matrix}} \longrightarrow \text{The Midpoint Formula}$$

$$e_p^d = \frac{\text{Change in } Q^d \div \text{Average Quantity}}{\text{Change in Price} \div \text{Average Price}}$$

| Price | Quantity Demanded |
|-------|-------------------|
| 0.5 | 22 |
| 1 | 19 |