CONCEPT: PERCENTAGE CHANGE AND PRICE ELASTICITY OF DEMAND

● Using percentage change in calculations allows us to make comparisons without worrying about units (i.e. dollars, cents).

$$Percentage\ Change = \frac{Change\ (\Delta)\ in\ X}{Original\ value\ of\ X} = \frac{New\ Value - Original\ Value}{Original\ Value}$$

● ***Elasticity*** is a _____ that relates changes between two variables.

□ The most commonly used variables when calculating elasticities: _____

Price Elasticity of Demand: How does quantity demanded respond to a change in price?

$$Price\ Elasticity\ of\ Demand = \frac{Percentage\ Change\ (\%\Delta)\ in\ Quantity\ Demanded}{Percentage\ Change\ (\%\Delta)\ in\ Price} = \frac{\%\Delta Q_d}{\%\Delta P}$$

EXAMPLE: When the price of dog bills rises by 20 percent, you buy 10 percent fewer dog bills. What is your price elasticity of demand for dog bills?

We use the absolute value of our answer because the price elasticity of demand equation always gives a negative answer.

□ Demand is ***elastic*** when _____

□ Demand is ***inelastic*** when _____

□ Demand is ***unit-elastic*** when _____

We get a different elasticity when we are increasing price than when we are decreasing price!

EXAMPLE: A pizza company's lunch special currently costs $5. At this price, the weekly demand is 2,000 lunch specials. If they raise their price to $6, the weekly demand will drop to 1,400 lunch specials. What is the price elasticity of demand?

EXAMPLE: A pizza company's lunch special currently costs $6. At this price, the weekly demand is 1,400 lunch specials. If they lower their price to $5, the weekly demand will increase to 2,000 lunch specials. What is the price elasticity of demand?