

ACTIVITY 3

NAME

Solution SET
OCT 5

ECONOMICS 101 IN-CLASS ACTIVITY FALL 2017 - 15 MINUTES
PLEASE COMPLETE THIS ACTIVITY ON YOUR OWN.

QUESTION 1

The price of Pepsi falls by 20 percent and the quantity consumed of Coke falls by 10 percent. The cross price elasticity of demand for Coke (with respect to the price of Pepsi) is

- a) 0.5 and Coke and Pepsi are substitutes
- b) -2 and Coke and Pepsi are substitutes
- c) 2 and Coke and Pepsi are complements
- d) -0.5 and Coke and Pepsi are substitutes
- e) None of the above

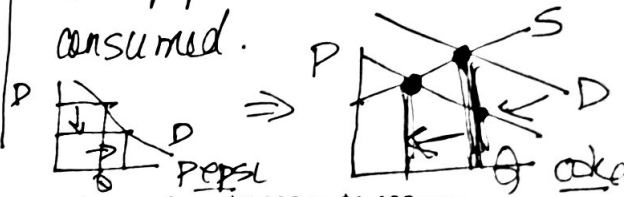
Select and explain your answer and be sure to use two well labeled graphs in your explanation.

$$P_{\text{pepsi}} \downarrow 20\% \Rightarrow Q_{\text{coke}} \downarrow 10\%$$

$$\text{To get value } \frac{20\%}{20} \neq \frac{10\%}{20}$$

$$\text{divide by 20} \mid \frac{10\% \Delta P}{P_{\text{pepsi}}} \Rightarrow 0.5\% \Delta Q_{\text{coke}}$$

Value is (-) negative value mean $P \downarrow$ pepsi influence more pepsi + less coke consumed.



QUESTION 2

a) Calculate and explain the income elasticity of demand for pizza when income changes from \$1,000 to \$1,400 per month and the quantity demanded of pizza goes from 10 to 6. Provide the value and explain what the answer really means - including the type of good using economic concepts or principles in your explanation.

$$\begin{aligned} \text{INCOME } 1000 &\Rightarrow 1400 & \Delta = +400 & \% \Delta \text{ INCOME} = 400/1000 = +.3333 \\ Q_D \text{ Pizza } 10 &\Rightarrow 6 & \Delta = -4 & \% \Delta Q_D = -4/10 = -.4 \end{aligned}$$

$$\text{INCOME ELASTICITY} = \frac{\% \Delta Q_D}{\% \Delta I} = \frac{-.4}{+.3333} = -1.2$$

$\uparrow 40\%$ of INCOME $\Rightarrow \downarrow 1.2\%$ of Pizza inferior good
HIGHER INCOME \Rightarrow \downarrow CONSUMPTION

b) Calculate and explain the price elasticity of demand for pizza between prices of \$14 and \$12 per pizza using the midpoint method when quantity demanded of pizza changes from 6 to 7. Compute the value and explain your answer using economic concepts or principles.

$$\begin{aligned} P \Delta 14 &\Rightarrow 12 & \Delta = -2 & \text{AVG} = 13 & \% \Delta P = \frac{-2}{13} = -.154 \\ Q \Delta 6 &\Rightarrow 7 & \Delta = 1 & \text{AVG} = 6.5 & \% \Delta Q_D = \frac{1}{6.5} = .154 \end{aligned}$$

$$P. \text{ Elasticity of Demand} = \frac{\% \Delta Q_D}{\% \Delta P} = \frac{.154}{-.154} = -1$$

UNITARY ELASTICITY
 $\uparrow 1\% \Rightarrow \downarrow 1\% Q_D$
NO need to put on DISCOUNT as no \uparrow Total Revenue.