

(1a)

$$Q_d = 400 - 5P$$

$$Q_s = 150 + 20P$$

(a) (i) Equilibrium Price

$$400 - 5P = 150 + 20P$$

$$400 - 150 = 20P + 5P$$

$$250 = 25P$$

$$P = \frac{250}{25}$$

$$P = \$10$$

(a) (ii) Equilibrium Quantity

$$Q_d = 400 - 5P$$

$$Q_d = 400 - 5(10)$$

$$Q_d = 400 - 50$$

$$Q_d = 350 \text{ units}$$

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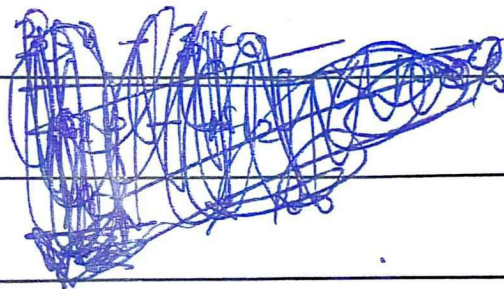
If the Price level changes to #12,
Calculate the:

(1) Elasticity of demand
$$\frac{\% \Delta \text{ in Quantity Demanded}}{\% \Delta \text{ in Price}}$$

at #10, $Q_d = 350$

at #12 $Q_d = 400 - 5(12)$

$400 - 60 = 340$



$$\frac{350 - 340}{350} \times 100\% = \frac{2.86}{20}$$

$$\frac{10 - 12}{10} \times 100\% = 20$$

Elasticity of demand is 0.143
which is Inelastic.

(1611)

Elasticity of Supply

$$\frac{\% \Delta \text{ in Quantity Supply}}{\% \Delta \text{ in Price}}$$

at #10, $Q_s = 150 + 20(10) = 350$

at #12, $Q_s = 150 + 20(12) = 390$

$$\frac{\frac{350 - 390}{350} \times 100\%}{\frac{10 - 12}{10} \times 100\%} = \frac{11.43}{20}$$

Elasticity of supply is 0.5715 which is Inelastic.

(1c)

Pick any four factors that affect demand include

- (i) Price of the Product
- (ii) Price of other Commodity
- (iii) Period of Festival
- (iv) Change in Taste or Fashion
- (v) Population