Answer on question #76005- Economics – Microeconomics.

Unique Creations holds a monopoly position in the production and sale of magnometers.

The cost function facing Unique is estimated to be

TC = $100,000 + 20Q

A) **Question: What is the marginal cost for Unique?**

Solution: Marginal Cost for Unique

TC = $100,000+20Q

Differentiate the total cost function

MC = d/dQ($100,000+20Q)

= 20

Answer: Marginal Cost 20

B) **Question: If the price elasticity of demand for Unique is currently –1.5, what price should Unique charge?**

Solution: Price to be charged

MR = p (1+ 1/Ed) this is equation 1

The marginal revenue (MR) is expressed as the $20 while the elasticity of demand (Ed) which is -1.5.

Then we substitute the values of MR and demand elasticity in equation 1

MR = p (1+1/Ed)

20= p(1+1/-1.5)

20= p(.5/1.5)

20*1.5=P.5

30=p.5

P=30/0.5

Answer: Unique must charge price $60

C) Question: What is the marginal revenue at the price computed in Part (b)?

Solution: Marginal Revenue at price $60

MR = P(1+1/Ed)

60(1+1/-1.5)

60*(0.5//1.5)

Answer: At price of $60, Marginal revenue is $20

D) Question: If a competitor develops a substitute for the magnometer and the price elasticity increases to –3.0, what price should Unique charge?

Solution: Change in demand elasticity due to substitutes

Marginal revenue must be equal to marginal cost to achieve equilibrium

MR = P(1+1/Ed)

20= MC

P(1+1/-3)=20

p(2/3)

20

P=60/30

= 30

Answer: The price Unique should charge has gone down to $30