

Answer on Question 70387-Economics - Microeconomics

A local pizzeria sells 500 large pepperoni pizzas per week at a price of \$20 each. Suppose the owner of the pizzeria tells you that the price elasticity of demand for his pizza is -3, and he asks you for advice. He wants to know two things. First, how many pizzas will he sell if he cuts his price by 10%? Second, how will his revenue be affected?

If he cuts his price by 10%, his sales will increase to ___ pizzas, and his total revenue will increase to \$ ___

Answer.

The point price elasticity of demand is calculated as

$$K_d = \frac{\Delta Q}{Q_1} : \frac{\Delta P}{P_1}$$

So,

$$K_d = \frac{\Delta Q}{Q_1} : 0.1 = -3, \Rightarrow \frac{\Delta Q}{Q_1} = -0.3$$

So, the quantity increases by 30%.

If he cuts his price by 10%, his sales will increase to $500 \times 1.3 = 650$ pizzas, and his total revenue will increase to $650 \times (\$20 \times 0.9) = \$11,700$

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