

Answer on Question #70582, Economics / Microeconomics |

After graduating from college, you are hired by the Ford automobile company as an economic analyst. For your first project, you are asked to estimate what would happen to the sales of Ford Mustangs as a result of a change in (i) the price of a Chevrolet Camaro, (ii) the price of gasoline, and (iii) consumer incomes. You are given the following elasticities:

Price elasticity of demand for Ford Mustangs = -2.5

Cross-price elasticity between Ford Mustangs and Camaros = 1.5

Cross-price elasticity between Ford Mustangs and gasoline = -0.80

Income elasticity of demand for Ford Mustangs = 3.00

QUESTIONS:

Part 1

Suppose the price of a Camaro falls by 10%. With all else being equal, sales of Ford Mustangs would Rise by 15%.

Formula:

$$kE_{II} = \frac{\% \Delta II_x}{\% \Delta II_y}$$

$\% \Delta II_x$ - percentage change in demand for goods X; $\% \Delta II_y$ - percentage change in demand for goods Y

$$1,5 = X/0,1; X = 0,15$$

Part 2

If the price of gasoline increases by 20%, the quantity of Ford Mustangs would Fall by 16%.

$$-0.8 = \text{quantity}/0,2$$

$$\text{Quantity} = -0,16$$

Part 3

If consumer incomes increase by 5%, the quantity of Ford Mustangs would Rise by 15%.

$$3 = \text{quantity} / 0,05$$

$$\text{Quantity} = 0,15$$

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