Answer on Question #40075 – Economics – Macroeconomics

Assignment

QX =1.0–2.0PX +0.8I+1.5PY –3PZ+1.0A
Where PX, PY, and PZ represent the prices of goods X, Y, and Z;
I measures income per capita; and A is advertising. Currently:
PX =2.00,PY =2.50,PZ =1.00,I=4,and A=3.05.

Calculate the advertising elasticity of demand for X. Interpret your answer.

What kind of change in the price of X would you recommend if the firm is interested in maximizing revenue?

Solution

Calculate the advertising elasticity of demand for X. Interpret your answer.

$$E_d = \frac{P}{Q_d} \times \frac{dQ_d}{dP}$$

So, Ed = k*A/Qx = -2*3.05/4 = -1.525, where k is coefficient before Px as the derivative of ΔQ/ΔP, so the advertising is elastic as Ed < -1.

What kind of change in the price of X would you recommend if the firm is interested in maximizing revenue?

As the advertising is elastic, the decrease in price will increase the revenue, as the change in quantity demanded will be higher than the change in price.