2. The demand curve for a product is given by Qdx =1,000 – 2pPx +.02Pz where Pz = $400.

a. What is the own price elasticity of demand Px = $154? Is demanded elastic or inelastic at this price? What would happen to the firm’s revenue if it decided to charge a price below $154?

b. What is the own price elasticity of demand Px = $354? Is demanded elastic or inelastic at this price? What would happen to the firm’s revenue if it decided to charge a price below $354?

c. what is the cross-price elasticity of demand between good X and good Z when Px = $154? Are goods X and Z substitutes or compliments?

3. Suppose the demand function for a firm’s product is given by

In Qdx  = 3 – 0.5 In Px - 2.5 In Py  + In *M* + 2 In *A*

Where

Px  = $10

Py = $4

*M* = $20,000, and

A = $250

a. Determine the own price elasticity of demand, and state whether demand is elastic, inelastic, or unitary elastic.

b. Determine the cross-price elasticity of demand between good X and good Y, and state whether these two are substitutes or complements.

c. Determine the income elasticity of demand, and state whether good X is a normal or inferior good.

d. Determine the own advertising elasticity of demand.