Answer on Question#38625 – Economics - Economics of Enterprise

P=30-Q/200, Q = 6000 - 200P

a. Compute the point elasticity at P=$10; at P=$15
Q1 = 4000, Q2 = 3000
Point Price Elasticity of Demand is given by the formula Ed= (P/Q)(ΔQ/ΔP).
ΔQ/ΔP is the derivative of the demand function, so it equals -200.

At price P=$10 we calculate
Ed1 = 10/4000*(-200) = -0.5, so the demand is inelastic.

At price P=$15 we calculate
Ed2 = 15/3000*(-200) = -1, so the demand is unit-elastic.

b. How does the point elasticity vary with the price?
As we can see with the increase of price, the point elasticity decreases, so the demand becomes more elastic.