

Marginal Revenue, PC/Monopoly

1. Assume a firm is facing the cost curves: $TC = 20 Q^3 - 450 Q^2 + 5000 Q + 5000$
 - a. Compute TFC, TVC, TC, AFC, AVC, ATC, and MC (use the derivative).
 - b. Plot the AC and MC curves

2. Industry demand has been estimated to be : $Q_d = 39 - 0.006 P$
 - a. Plot the Demand curve for prices ranging from 0 to 6500
 - b. Calculate the marginal revenue and plot it. Avoid using the difference formula but calculate it precisely.

3. Combine the Demand data with the Cost data.
 - a. Estimate the equilibrium quantity and price that would exist if the firm operated in perfect competition.
 - b. Estimate the price and quantity that would exist if the firm operated in pure monopoly.