Monopoly Review – Basic Profit Maximization

A monopolist faces inverse demand of P=4-0.02Q, a per unit variable cost of \$1.5, and fixed costs of F.

a) Find the profit maximizing price and quantity.

b) Depict the solution to (a) in a figure.

c) At what level of fixed cost would the monopolist decide it was not worth remaining in the market?

a) MR=MC, 4-0.04Q=1.5, Q=2.5×100/4=62.5, p=4-0.02×62.5=2.75.

b) See figure.

c) π=(2.75-1.5)62.5-F=78.125-F. F can be at most 78.125 or the firm would exit in the long run.