

1. Suppose the demand function for a given market is given by

$$P = 200 - 50Q$$

and $mc = 20$.

If the firm is perfectly competitive:

Find P^* , Q^* , CS^* , PS^* , W^* .

If the firm is a monopolist:

Find P^M , Q^M , CS^M , PS^M , W^M , and DWL .

Answer:

$$P^* = 20$$

$$Q^* = 3.6$$

$$CS^* = 324$$

$$PS^* = 0$$

$$W^* = 324$$

$$P^M = 110$$

$$Q^M = 1.8$$

$$CS^M = 81$$

$$PS^M = 162$$

$$W^M = 243$$

$$DWL = 81$$