



# Class 6

# Exercises

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## Chapter 10 Exercise 4



- A firm faces the following average revenue (demand) curve:

$$P = 120 - 0.02Q$$

where  $Q$  is weekly production and  $P$  is price, measured in cents per unit. The firm's cost function is given by  $C=60Q+25,000$ . Assume that the firm maximizes profits.

- **a.** What is the level of production, price, and total profit per week?
- **b.** If the government decides to levy a tax of 14 cents per unit on this product, what will be the new level of production, price, and profit?

# Chapter 10 Exercise 15



- Dayna's Doorstops, Inc. (DD) is a monopolist in the doorstop industry. Its cost is  $C=100-5Q+Q^2$ , and demand is  $P=55-2Q$ .
- **a.** What price should DD set to maximize profit? What output does the firm produce? How much profit and consumer surplus does DD generate?
- **b.** What would output be if DD acted like a perfect competitor and set  $MC=P$ ? What profit and consumer surplus would then be generated?
- **c.** What is the deadweight loss from monopoly power in part (a)?
- **d.** Suppose the government, concerned about the high price of doorstops, sets a maximum price at \$27. How does this affect price, quantity, consumer surplus, and DD's profit? What is the resulting deadweight loss?
- **e.** Now suppose the government sets the maximum price at \$23. How does this decision affect price, quantity, consumer surplus, DD's profit, and deadweight loss?
- **f.** Finally, consider a maximum price of \$12. What will this do to quantity, consumer surplus, profit, and deadweight loss?