



2. Consider a monopoly seller of tickets to classic Japanese movies. The cost of showing the movie to an extra customer is zero. The quantity demanded for tickets is given by:  $Q_D = 1500 - 100P$ , where  $Q_D$  is the number of tickets that will sell at price  $P$  and where  $P$  is given in dollars.
- What is the price that the monopolist should charge if it wants to maximize profits?
  - What is the quantity of tickets sold at that price?
  - What is the consumer surplus?
  - What is the monopolist's profit?
  - Suppose that PDC imposes a price ceiling after deciding that it is unfair to make anybody pay more than \$4 a ticket for a movie. What is the consumer surplus? What is the monopolist's profit?

3. Continue with the situation as in question 2: a monopoly seller of tickets to classic Japanese movies. The cost of showing the movie to an extra customer is zero. The demand curve for tickets is:  $Q_D = 1500 - 100P$ , where  $Q_D$  is the number of tickets that will sell at price  $P$  and where  $P$  is given in dollars. But now suppose that there is a fixed cost of \$5,000 to obtain the movie and a projector.
- What is the price that the monopolist should charge if it wants to maximize profits?
  - What is the quantity of tickets sold at that price?
  - What is the consumer surplus?
  - What is the monopolist's profit?
  - Suppose that PDC imposes a price ceiling after deciding that it is unfair to make anybody pay more than \$4 per ticket for a movie. What is the consumer surplus? What is the monopolist's profit?



- c. For  $Q_D = 1500 - 150P$ : What is the price that the monopolist should charge if it wants to maximize profits? What is the quantity of tickets sold at that price? What is the consumer surplus? What is the monopolist's profit?
- d. For  $Q_D = 2000 - 500P$ : What is the price that the monopolist should charge if it wants to maximize profits? What is the quantity of tickets sold at that price? What is the consumer surplus? What is the monopolist's profit?



6. Extending question 5, suppose that anybody who wants to can open up a boat-rental shack. The cost to *each* boat-rental shack is \$2,000/day no matter how many boats it rents.
  - a. In equilibrium, how many boat rental shacks do you think there will be?

