Classes 4 Exercises

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Chapter 8 Exercise 12

- A number of stores offer film developing as a service to their customers. Suppose that each store offering this service has a cost function $C(q)=50+0.5q+0.08q^2$ and a marginal cost $MC=0.5+0.16q$.
- **a.** If the going rate for developing a roll of film is $8.50, is the industry in long-run equilibrium? If not, find the price associated with long-run equilibrium.
- **b.** Suppose now that a new technology is developed which will reduce the cost of film developing by 25 percent. Assuming that the industry is in long-run equilibrium, how much would any one store be willing to pay to purchase this new technology?

Chapter 8 Exercise 13

- Consider a city that has a number of hot dog stands operating throughout the downtown area. Suppose that each vendor has a marginal cost of $1.50 per hot dog sold and no fixed cost. Suppose the maximum number of hot dogs that any one vendor can sell is 100 per day.
- **a.** If the price of a hot dog is $2, how many hot dogs does each vendor want to sell?
- **b.** If the industry is perfectly competitive, will the price remain at $2 for a hot dog? If not, what will the price be?
- **c.** If each vendor sells exactly 100 hot dogs a day and the demand for hot dogs from vendors in the city is $Q = 4400 - 1200P$, how many vendors are there?
- **d.** Suppose the city decides to regulate hot dog vendors by issuing permits. If the city issues only 20 permits and if each vendor continues to sell 100 hot dogs a day, what price will a hot dog sell for?
- **e.** Suppose the city decides to sell the permits. What is the highest price that a vendor would pay for a permit?