ECON 201 Microeconomics

Homework 4

Chapter 12

3. Bob produces Blu-ray movies for sale, which requires a building and a machine that copies the original movie onto a Blu-ray. Bob rents a building for $30,000 per month and rents a machine for $20,000 a month. Those are his fixed costs. His variable cost per month is given in the accompanying table.

Quantity of Blu-rays	*VC*
0	$0
1,000	5,000
2,000	8,000
3,000	9,000
4,000	14,000
5,000	20,000
6,000	33,000
7,000	49,000
8,000	72,000
9,000	99,000
10,000	150,000

a. Calculate Bob's average variable cost, average total cost, and marginal cost for each quantity of output.

b. There is free entry into the industry, and anyone who enters will face the same costs as Bob. Suppose that currently the price of a Blu-ray is $25. What will Bob's profit be? Is this a long-run equilibrium? If not, what will the price of Blu-ray movies be in the long run?

6. a. A profit-maximizing business incurs an economic loss of $10,000 per year. Its fixed cost is $15,000 per year. Should it produce or shut down in the short run? Should it stay in the industry or exit in the long run?

b. Suppose instead that this business has a fixed cost of $6,000 per year. Should it produce or shut down in the short run? Should it stay in the industry or exit in the long run?

Chapter 13

3. Bob, Bill, Ben, and Brad Baxter have just made a documentary movie about their basketball team. They are thinking about making the movie available for download on the Internet, and they can act as a single-price monopolist if they choose to. Each time the movie is downloaded, their Internet service provider charges them a fee of $4. The Baxter brothers are arguing about which price to charge customers per download. The accompanying table shows the demand schedule for their film.

Price of download	Quantity of downloads demanded
$10	0
8	1
6	3
4	6
2	10
0	15

a. Calculate the total revenue and the marginal revenue per download.

b. Bob is proud of the film and wants as many people as possible to download it. Which price would he choose? How many downloads would be sold?

c. Bill wants as much total revenue as possible. Which price would he choose? How many downloads would be sold?

d. Ben wants to maximize profit. Which price would he choose? How many downloads would be sold?

e. Brad wants to charge the efficient price. Which price would he choose? How many downloads would be sold?

Chapter 15

6. "In the long run, there is no difference between monopolistic competition and perfect competition." Discuss whether this statement is true, false, or ambiguous with respect to the following criteria.

a. The price charged to consumers

b. The average total cost of production

c. The efficiency of the market outcome

d. The typical firm's profit in the long run