1. Use the following to calculate profit at each quantity of

output.

**Total Total Total**

**Output Price Revenue Cost**

**(*Q*) (*P*) (*TR*) (*TC*)**

**0 $1,900 $ 0 $1,000**

**1 $1,700 $ 1,700 $2,000**

**2 $1,650 $ 3,300 $2,800**

**3 $1,600 $ 4,800 $3,500**

**4 $1,550 $ 6,200 $4,000**

**5 $1,500 $ 7,500 $4,500**

**6 $1,450 $ 8,700 $5,200**

**7 $1,400 $ 9,800 $6,000**

**8 $1,350 $10,800 $7,000**

**9 $1,300 $11,700 $9,000**

2. Use the table in exercise 1 to calculate marginal revenue

and marginal cost.

3. Use the information in exercises 1 and 2 to graphically

show maximum profit. Label the profit-maximizing

quantity and price, total cost, total revenue, and profit.

1. Cost figures for a hypothetical firm are given in the following

table. Use them for the exercises below. The firm

is selling in a perfectly competitive market.

**Fixed Variable Total**

**Output Cost *AFC* Cost *AVC* Cost *ATC MC***

**1 $50 $ 30**

**2 $50 $ 50**

**3 $50 $ 80**

**4 $50 $120**

**5 $50 $170**

a. Fill in the blank columns.

b. What is the minimum price needed by the firm to

break even?

c. What is the shutdown price?

d. At a price of $40, what output level would the firm

produce? What would its profits be

14. Use the following data for the exercises below.

**Price Quantity Supplied Quantity Demanded**

**$20 30 0**

**$18 25 5**

**$16 20 10**

**$14 15 15**

**$12 10 20**

**$10 5 25**

**$ 8 0 30**

a. What is the equilibrium price and quantity?

b. Draw the demand and supply curves. If this represents

perfect competition, are the curves individual firm

or market curves? How is the quantity supplied

derived?

c. Show the consumer surplus. Show the producer surplus.

d. Suppose that a price ceiling of $12 was imposed.

How would this change the consumer and producer

surplus? Suppose a price floor of $16 was imposed.

How would this change the consumer and producer

surplus?

8. Consider the following demand schedule. Does it apply

to a perfectly competitive firm? Compute marginal and

average revenue.

**Price Quantity Price Quantity**

**$100 1 $70 5**

**$ 95 2 $55 6**

**$ 88 3 $40 7**

**$ 80 4 $22 8**

9. Suppose the marginal cost of producing the good in

question 8 is a constant $10 per unit of output. What

quantity of output will the firm produce?

14. Suppose that a firm has a monopoly on a good with the

following demand schedule:

**Price Quantity Price Quantity**

**$10 0 $4 6**

**$ 9 1 $3 7**

**$ 8 2 $2 8**

**$ 7 3 $1 9**

**$ 6 4 $0 10**

**$ 5 5**

a. What price and quantity will the monopolist produce at if the marginal cost is a

constant $4?

b. Calculate the deadweight loss from having the monopolist produce, rather than a

perfect competitor.