Homework (chapters 17 & 18)

Due Mar 9 at 11:59pm   **Points** 20   **Questions** 20

Available until Mar 9 at 11:59pm   **Time Limit** None   **Allowed Attempts** 2

Instructions

This required homework assignment covers material from chapters 17 and 18.

Homework answers may be saved and returned to, as long as it is within the deadline. To do so, remember to save your responses before leaving the Canvas website, and do not click on the "Submit" button (or Canvas will automatically grade your assignment and you will have no way of changing your answers). If you start the quiz before the deadline but do not finish by the deadline, Canvas will submit the homework for you at the deadline.

This quiz was locked Mar 9 at 11:59pm.

Attempt History

	Attempt	Time	Score
KEPT	**Attempt 2**	16 minutes	19 out of 20
LATEST	**Attempt 2**	16 minutes	19 out of 20
	Attempt 1	30 minutes	15 out of 20

Score for this attempt: **19** out of 20
Submitted Mar 3 at 12:16pm
This attempt took 16 minutes.

Question 1	**1 / 1 pts**

In general, *game theory* is the study of

Correct!   ⦿ how people behave in strategic situations.

○ how people behave when the possible actions of other people are irrelevant.

○ oligopolistic markets.

○ all types of markets, including competitive markets, monopolistic markets, and oligopolistic markets.

Question 2

1 / 1 pts

A distinguishing feature of an oligopolistic industry is the tension between

○ profit maximization and cost minimization.

Correct!

◉ cooperation and self interest.

○ producing a small amount of output and charging a price above marginal cost.

○ short-run decisions and long-run decisions.

Question 3

1 / 1 pts

Table 17-2
Imagine a small town in which only two residents, Abby and Brad, own wells that produce safe drinking water. Each week Abby and Brad work together to decide how many gallons of water to pump. They bring water to town and sell it at whatever price the market will bear. To keep things simple, suppose that Abby and Brad can pump as

much water as they want without cost so that the marginal cost is zero. The weekly town demand schedule and total revenue schedule for water is shown in the table below:

Quantity (in gallons)	Price	Total Revenue (and Total Profit)
0	$12	$0
1	$11	$11
2	$10	$20
3	$9	$27
4	$8	$32
5	$7	$35
6	$6	$36
7	$5	$35
8	$4	$32
9	$3	$27
10	$2	$20
11	$1	$11
12	$0	$0

Refer to Table 17-2. If this market for water were perfectly competitive instead of monopolistic, how many gallons of water would be produced and sold?

Correct!

- ◉ 12 gallons

- ○ 8 gallons

- ○ 6 gallons

○ 0 gallons

Question 4

1 / 1 pts

Table 17-2

Imagine a small town in which only two residents, Abby and Brad, own wells that produce safe drinking water. Each week Abby and Brad work together to decide how many gallons of water to pump. They bring water to town and sell it at whatever price the market will bear. To keep things simple, suppose that Abby and Brad can pump as much water as they want without cost so that the marginal cost is zero. The weekly town demand schedule and total revenue schedule for water is shown in the table below:

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6	$6	$36
7	$5	$35
8	$4	$32
9	$3	$27
10	$2	$20
11	$1	$11

12	$0	$0

Refer to Table 17-2. Suppose the town enacts new antitrust laws that prohibit Abby and Brad from operating as a monopoly. What will be the price of water once Abby and Brad reach a Nash equilibrium?

○ $12

○ $8

○ $6

Correct!   ◉ $4

Question 5   1 / 1 pts

Table 17-2

Imagine a small town in which only two residents, Abby and Brad, own wells that produce safe drinking water. Each week Abby and Brad work together to decide how many gallons of water to pump. They bring water to town and sell it at whatever price the market will bear. To keep things simple, suppose that Abby and Brad can pump as much water as they want without cost so that the marginal cost is zero. The weekly town demand schedule and total revenue schedule for water is shown in the table below:

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7	$5	$35
8	$4	$32
9	$3	$27
10	$2	$20
11	$1	$11
12	$0	$0

Refer to Table 17-2. Suppose the town enacts new antitrust laws that prohibit Abby and Brad from operating as a monopoly. How much profit will Abby and Brad *each* earn once they reach a Nash equilibrium?

- ○ $36
- ○ $32
- ○ $18

Correct!

- ◉ $16

Question 6

1 / 1 pts

When an oligopoly market reaches a Nash equilibrium,

- ○ the market price will be different for each firm.

- ○ the firms will not have behaved as profit maximizers.

Correct!

○ a firm will have chosen its best strategy, given the strategies chosen by other firms in the market.

○ a firm will not take into account the strategies of competing firms.

Question 7   1 / 1 pts

As a group, oligopolists earn the highest profit when they

○ achieve a Nash equilibrium.

Correct!

◉ produce a total quantity of output that falls short of the Nash-equilibrium total quantity.

○ produce a total quantity of output that exceeds the Nash-equilibrium total quantity.

○ charge a price that falls short of the Nash-equilibrium price.

Question 8   1 / 1 pts

To be successful, a cartel must

○ find a way to encourage members to produce more than they would otherwise produce.

○ agree on the total level of production for the cartel, but they need not agree on the amount produced by each member.

Correct!

◉ agree on the total level of production and on the amount produced by each member.

○ agree on the prices charged by each member, but they need not agree on amounts produced.

Question 9   1 / 1 pts

When price is above marginal cost, selling one more unit at the current price will increase profit. This concept is known as the

○ income effect.

○ price effect.

Correct!

◉ output effect.

○ cartel effect.

Question 10   1 / 1 pts

The prisoners' dilemma provides insights into the

Correct!

◉ difficulty of maintaining cooperation.

○ benefits of avoiding cooperation.

○ benefits of government ownership of monopoly.

○ ease with which oligopoly firms maintain high prices.

Question 11   1 / 1 pts

Table 17-13

Two home-improvement stores (Lopes and HomeMax) in a growing urban area are interested in expanding their market share. Both are interested in expanding the size of their store and parking lot to accommodate potential growth in their customer base. The following game depicts the strategic outcomes that result from the game. Increases in annual profits of the two home-improvement stores are shown in the table below.

Lopes

		Increase the size of store and parking lot	*Do not increase the size of store and parking lot*
HomeMax	*Increase the size of store and parking lot*	Lopes = $1.0 million HomeMax = $1.5 million	Lopes = $0.4 million HomeMax = $3.4 million
	Do not increase the size of store and parking lot	Lopes = $3.2 million HomeMax = $0.6 million	Lopes = $2.0 million HomeMax = $2.5 million

Refer to Table 17-13. When this game reaches a Nash equilibrium, annual profit will grow by

Correct!

◉ $1.5 million for HomeMax and by $1.0 million for Lopes.

○ $3.4 million for HomeMax and by $0.4 million for Lopes.

○ $0.6 million for HomeMax and by $3.2 million for Lopes.

○ $2.5 million for HomeMax and by $2.0 million for Lopes.

Question 12

1 / 1 pts

Table 17-13

Two home-improvement stores (Lopes and HomeMax) in a growing urban area are interested in expanding their market share. Both are interested in expanding the size of their store and parking lot to accommodate potential growth in their customer base. The following game depicts the strategic outcomes that result from the game. Increases in annual profits of the two home-improvement stores are shown in the table below.

Lopes

		Increase the size of store and parking lot	*Do not increase the size of store and parking lot*
HomeMax	*Increase the size of store and parking lot*	Lopes = $1.0 million HomeMax = $1.5 million	Lopes = $0.4 million HomeMax = $3.4 million
	Do not increase the size of store and parking lot	Lopes = $3.2 million HomeMax = $0.6 million	Lopes = $2.0 million HomeMax = $2.5 million

Refer to Table 17-13. Suppose the owners of Lopes and HomeMax meet for a friendly game of golf one afternoon and happen to discuss a strategy to optimize growth related profit. They should both agree to

○ increase their store and parking lot sizes.

Correct!

◉ refrain from increasing their store and parking lot sizes.

○ be more competitive in capturing market share.

○
share the context of their conversation with the Federal Trade Commission.

Question 13 | 1 / 1 pts

Figure 17-5. Two companies, ABC and QRS, are sellers in the same market. Each company decides whether to charge a high price or a low price. In the figure, the dollar amounts are payoffs and they represent annual profits for the two companies.

ABC's Decision

	High price	Low price
High price	ABC's profit = $10 million / QRS's profit = $10 million	ABC's profit = $14 million / QRS's profit = $4 million
Low price	ABC's profit = $4 million / QRS's profit = $14 million	ABC's profit = $6.5 million / QRS's profit = $6.5 million

QRS's Decision

Refer to Figure 17-5. The dominant strategy for ABC is to

○
charge a high price, and the dominant strategy for QRS is to charge a high price.

○
charge a high price, and the dominant strategy for QRS is to charge a low price.

○
charge a low price, and the dominant strategy for QRS is to charge a high price.

Correct!

◉

charge a low price, and the dominant strategy for QRS is to charge a low price.

Question 14   1 / 1 pts

Table 17-14
This table shows a game played between two players, A and B. The payoffs in the table are shown as (Payoff to A, Payoff to B).

B

		Left	*Right*
A	*Up*	(4, 4)	(6, 2)
	Down	(2, 6)	(0, 0)

Refer to Table 17-14. Which of the following statements about this game is true?

○ Up is a dominant strategy for A and Right is a dominant strategy for B.

Correct!

◉ Up is a dominant strategy for A and Left is a dominant strategy for B.

○

Down is a dominant strategy for A and Right is a dominant strategy for B.

○

Down is a dominant strategy for A and Left is a dominant strategy for B.

Question 15   1 / 1 pts

Table 17-14

This table shows a game played between two players, A and B. The payoffs in the table are shown as (Payoff to A, Payoff to B).

B

	Left	Right
Up	(4, 4)	(6, 2)
Down	(2, 6)	(0, 0)

A

Refer to Table 17-14. Which outcome is the Nash equilibrium in this game?

- ○ Up-Right

Correct!
- ⦿ Up-Left

- ○ Down-Right

- ○ Down-Left

Question 16   1 / 1 pts

Because a firm's demand for a factor of production is derived from its decision to supply a good in the market, it is called a
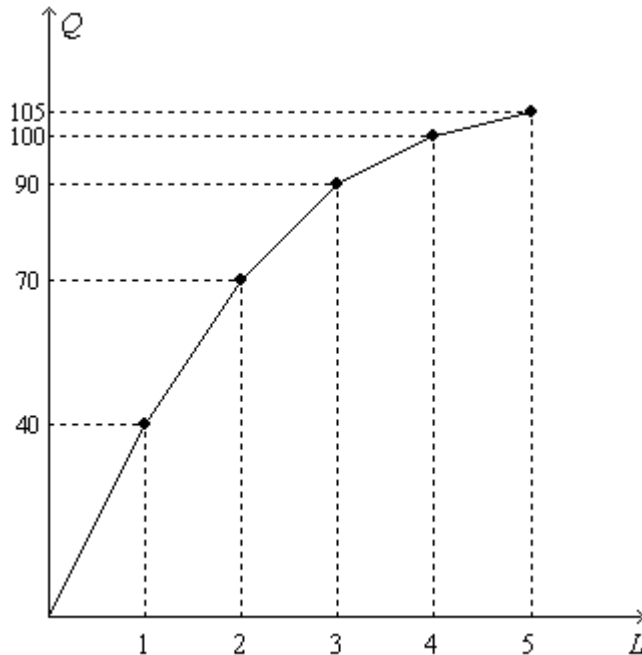
- ○ marginal product of demand.

- ○ secondary demand.

Correct!
- ⦿ derived demand.

- ○ compensatory demand.

Question 17   1 / 1 pts

Figure 18-2
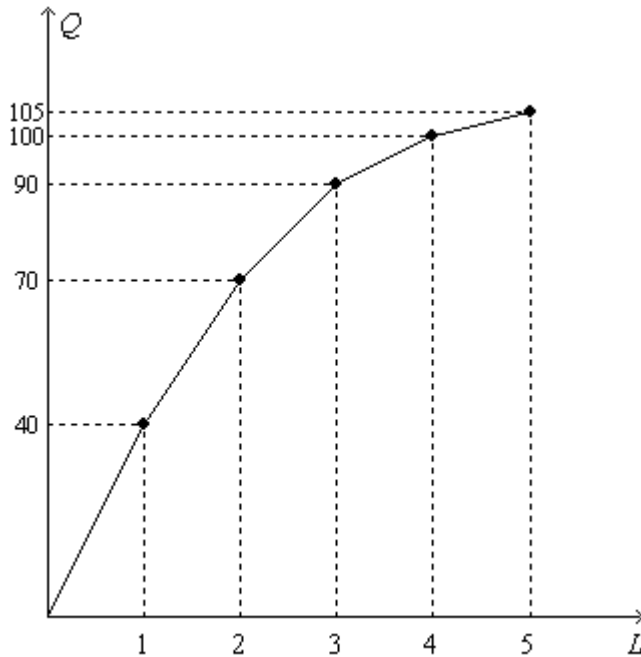The figure below shows the production function for a particular firm.

Refer to Figure 18-2. Suppose the firm pays a wage equal to $160 per unit of labor and sells its output at $10 per unit. How many units of labor should the firm hire to maximize profit?

- ○ 2 units

Correct!

- ◉ 3 units

- ○ 4 units

- ○ 5 units

Question 18   0 / 1 pts

Figure 18-2

The figure below shows the production function for a particular firm.

Refer to Figure 18-2. Suppose the firm pays a wage equal to $320 per unit of labor and sells its output at $15 per unit. How many units of labor should the firm hire to maximize profit?

orrect Answer
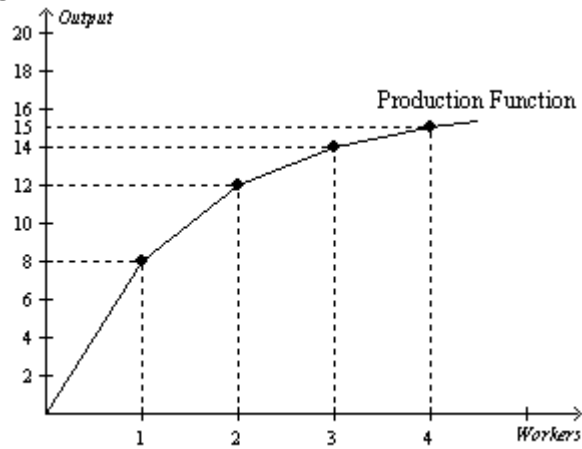
    ○   2 units

ou Answered

    ⊙   3 units

    ○   4 units

    ○   5 units

Question 19   1 / 1 pts

Figure 18-3

Refer to Figure 18-3. Suppose that the price of the output is $20. What is the value of the marginal product of the third worker?

○ $2

○ $10

Correct!   ◉ $40
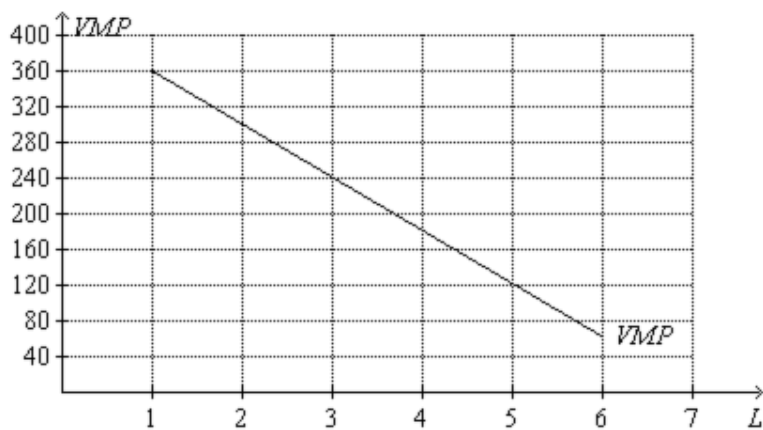
○ $280

Question 20   **1 / 1 pts**

Figure 18-5
The figure shows a particular profit-maximizing, competitive firm's value-of-marginal-product (*VMP*) curve. On the horizontal axis, *L* represents the number of workers. The time frame is daily.

Refer to Figure 18-5. Suppose the marginal product of the fifth unit of labor is 30 units of output per day. The figure implies that the

Correct!

○ price of output is $4.

○ price of output is $6.

○ price of output is $8.

○ daily wage is $120.

Quiz Score: **19** out of 20