

# Your Business Role in the Economy



# 7.3

## *Student Activity*

This lesson's suggested activity is a classroom simulation. This simulation will demonstrate the actions in an oligopoly/cartel gasoline market. Students are assigned different roles (buyer, seller or cartel member) and must negotiate prices and perform transactions while trying to get the best price possible.

## *Additional Activities*

**Student Case Studies:** In order that students are able to apply and use the information in this lesson, a case study review and discussion can be an important element of your instruction. Case studies can be part of required homework, enrichment and acceleration, testing or replacement for missed classes and discussions. See the reference to case studies in the planning guide for teachers, included in this manual.

**Independent Research:** Consider challenging your students to research the movement of gasoline prices in the last six months or year and determine the market factors and changes in the market. You may want to consider having student's predict future changes in the gasoline market based upon the global economic factors that they believe are relevant to the market situation.

## *Performance Objectives*

Students should be able to:

- State the five characteristics of an oligopolistic market.
- Describe how the interdependence of oligopolies affects pricing strategies.
- Demonstrate how game theory is used to predict the behavior of businesses in an oligopolistic market.
- Discuss business strategies to maximize profits in an oligopolistic market.

## *Key Terms*

cartel  
collusion  
game theory  
interdependence  
oligopoly  
price leadership  
prisoner's dilemma  
product differentiation

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### Classroom Simulation

#### Oligopoly/Cartel Simulation

Student Activities Master: 7.3-pgs. 1-2

**Wait for your instructor to assign your role in this simulation before you begin.**

**Overview:** In the following simulation, you will be participating in a mock gasoline market. You will be assigned the role of a gasoline buyer, gasoline seller or a member of a gasoline cartel.

**General Instructions for All Players:** The simulation will involve three rounds of buying and selling gasoline. Prices will be set by individual players who make agreements in the "market" (your classroom). There is no maximum or minimum price for gasoline. At the end of the three rounds, the winners will be the seller who earned the most money and the buyer who spent the least money. All players must record their information on the transaction recording sheet. All sellers must provide their sales information to the instructor after each round.

**Instructions for Gasoline Buyers:** Gasoline buyers are motivated to spend as little money as possible for gasoline. Unfortunately, gasoline is an inelastic product and buyers must have it. Therefore, buyers are required to buy three "tanks" of gasoline each round. **Any buyer not acquiring three "tanks" each round is eliminated from the game.** There is one exception to this rule. You may purchase "solar energy" instead of gasoline (see instructions provided). Remember that the buyer who spends the least amount of money to acquire nine "tanks" (three tanks purchased in three rounds) is the winner.

**Instructions for Independent Gasoline Sellers:** Gasoline sellers are motivated to earn as much revenue as possible for their gasoline. You may charge as much as you like for your gasoline, but remember that there is competition in the market. Other gasoline sellers will try to undercut your price to steal your business. You may sell only three tanks of gasoline each round. **Selling a fourth tank eliminates you from the game.** Remember that you may not discuss your prices with any other seller, or make any agreements with other sellers about how much you will charge buyers.

**Instructions for Cartel Members:** You are also in the business of selling gasoline. Your motivations are the same as other sellers - to make as much revenue as possible while selling your gasoline. Like independent sellers, you are allowed to sell only three tanks of gasoline each round. However, unlike independent sellers, you are allowed to set prices with other cartel members. If you want, you may set a price among yourselves and hold to it while you are selling your gasoline in the market.

**Instructions for Purchasing Solar Energy:** All buyers have the option to buy solar energy instead of gasoline. Your instructor is the only seller of solar energy. The cost is \$40 a tank. This means that gasoline sellers should never demand more than \$40 for their product. The availability of a substitute (solar energy) at \$40 makes a higher price economically undesirable to gasoline buyers.

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### **STEPS FOR RUNNING THE SIMULATION**

For the simulation, you will need to divide the class into three groups: 50 percent of the class must be gasoline buyers, 25 percent must be independent sellers and 25 percent must be cartel members. If there is an uneven number of students, make sure there are extra sellers, not extra buyers. There is no money in this game. All transactions take place with individual buyers and sellers making deals as to what price they will both accept. However, no money changes hands. They both record the agreed-upon price on their transaction recording sheets.

As the instructor, you must perform several tasks during the simulation.

- Prevent the independent sellers from meeting and agreeing on a price to sell their gasoline.
- Assign the cartel members a set amount of time and a place to meet in order to agree on a selling price.
- At the end of each round, every sale (tank) must be recorded on an overhead transparency.
- The template is provided. To prevent duplication, record the sales information from the sellers, not the buyers. Make sure that all of the sellers provide their information.
- You should instruct all of the students to review the information provided on the overhead transparency. They can use this information to change the price at which they have been selling or buying.

**NOTE: You should notice a gradual movement of all sellers toward the price the cartel is charging. The cartel will act as price leaders. The independent sellers will likely follow the cartel's lead.**

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<b>Transaction Recording Sheet</b>		
<b>Role:</b> _____ (Select One: Gasoline Buyer, Independent Gasoline Seller, Cartel Member)		
Round #	Gas Price	Total Spent (Buyers) or Total Revenue (Sellers)
1	Tank # _____ Tank # _____ Tank # _____ Tank # _____	
2	Tank # _____ Tank # _____ Tank # _____ Tank # _____	
3	Tank # _____ Tank # _____ Tank # _____ Tank # _____	

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Price (\$) per Tank	Round 1	Round 2	Round 3
\$50			
\$49			
\$48			
\$47			
\$46			
\$45			
\$44			
\$43			
\$42			
\$41			
\$40			
\$39			
\$38			
\$37			
\$36			
\$35			
\$34			
\$33			
\$32			
\$31			
\$30			
\$29			
\$28			
\$27			
\$26			
\$25			
\$24			
\$23			
\$22			

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### ***Frequently Asked Questions***

#### **Do mergers cause oligopolies?**

Mergers can contribute to the decrease in the number of businesses in an industry. In that sense, mergers do contribute to the forming of oligopolies. However, mergers are just one of many actions that contribute to oligopolistic markets. The Federal Trade Commission (FTC) regulates mergers in order to maintain competition in markets.

#### **Can price leadership lead to increases in prices?**

Price wars usually refer to competition among businesses that decreases prices. However, many times in an oligopolistic market, a price leader will be the first to increase prices and other businesses will follow that lead. This is most common in the airline industry. *Ask students if there are any current examples in your community or in our economy of price wars?*

#### **How does the Justice Department prove collusion?**

It is very difficult to prove collusion. Most industry officials meet on a regular basis at conferences or other industry-wide events. These meetings provide many opportunities to casually discuss prices. For instance, the Justice Department has long been suspicious of Ivy League universities. Almost all of them charge a very similar tuition. However, the Justice Department has never levied charges.