

# The Students' Dilemma

## Warm Up

### OVERVIEW

You and a friend have been caught skipping school. The principal has taken both of you down to his office and placed you in separate rooms. Once you have been placed in the rooms, the principal offers each of you the following options. Here are your choices.

- 1) **Stay Quiet**  
If both of you stay quiet, each of you will serve only 3 days of detention.
- 2) **Stay Quiet**  
If you stay quiet and your friend confesses to skipping school, you will receive 15 days of detention and your friend will only receive 1 day of detention.
- 3) **Confess**  
If you confess and your friend does not confess, you only have to serve 1 day of detention, but your friend will be stuck with 15 days of detention.
- 4) **Confess**  
If both of you confess, each of you will serve 10 days of detention.



### PAYOFF MATRIX

Write the proper values in the payoff matrix below.

		Friend #2	
		Stay Quiet	Confess
Friend #1	Stay Quiet		
	Confess		

THE STUDENTS' DILEMMA AND OLIGOPOLY

Firms in an oligopolistic market, one where there are only a few producers, experience a similar scenario to this dilemma faced by the students. Suppose the soft drink market only has two producers: Pepsi and Coca-Cola. These two companies will certainly face the dilemma of how much to produce and what price to charge. And each company's decision will be dependent upon the decision of the other company. Each company can either act cooperatively, or it can act defiantly. The corresponding level of yearly profits is listed in the payoff matrix. Use this payoff matrix to answer the questions.

		Coca-Cola	
		Cooperate	Defiant
Pepsi	Cooperate	\$80 million / \$80 million	\$100 million / \$50 million
	Defiant	\$100 million / \$50 million	\$70 million / \$70 million

- 1) Under what conditions will the total profit made by both companies be maximized?
  
- 2) If this is a game that these companies play only once, what is the likely outcome?
  
- 3) Suppose these firms are in the same industry for many years, which means they play this game several times. What do you think is the likely outcome?