經濟學原理一課堂實驗(十)：獨占、聯合壟斷與價格歧視
Principles of Economics I - Classroom Experiment (10): Monopoly, Cartel, and Price Discrimination

全班分成三十組參與交易實驗。每回合中，各組可以買賣一單位的商品。每回合每組同學會先抽一張撲克牌決定買賣角色。拿到鬼牌(共六張)的是賣家，否則就是買家(共二十四張)。賣家最多只能當一次，下次再拿到鬼牌請重抽。Sixty students participate by forming 30 groups. Each group draws a card in each round to determine their role: If you draw a Joker (6 groups), you are a seller; otherwise you are a buyer (24 groups). Each group can be a seller at most once; please re-draw if you drew a Joker twice.

買家 Buyer：每回合買家可以買進一單位的商品。買到商品所獲得的價值取決於所拿到的撲克牌 (J 代表 11，Q 代表 12，K 代表 13，但 A 代表 1)。您的牌面數字**乘以十再加上一**代表買到商品會獲得的價值(元)。舉例來說，如果拿到的卡片是黑桃九，那您的價值就是九十一元。請收好這張牌使得別人沒辦法看到牌面花色數字。整個市場的需求如下表一。Each buyer can buy one good per round. Your value for consuming the good depends on your card (J=11, Q=12, K=13, A=1)—it is the "number on your card multiplied by 10 and plus 1." For example, if your card is "9 of Spades", your value is $(9x10) + $1 = $91. Please store your card properly so no one can peek. Table 1 is the market demand schedule.

賣家 Seller：每回合賣家可以販賣任何數量的商品，單位成本均為**十九元**。請將所有的交易記錄在本說明背面的公司營運記錄表。交易開始時賣家需在黑板上寫下商品標價，等候買家上門購買。最後一回合中，拿到紅色牌的買家為學生，否則為社會人士。兩者市場的需求如下表二、三。賣家可以訂定兩個價格(原價和學生價) ， 並 根 據 買 家 是 否 出 示 學 生 證 (紅 色 牌) 來 決 定 是 否 給 予 優 待 價 。 In each round, sellers can sell *as many products as they want* at a cost of $19 per unit. Please record your transactions at the back of this instruction sheet. Each seller should post their prices on the blackboard and wait for buyers to come. In the last round, buyers with *red* cards are *students* (the rest are non-students). The market demand of students and non-students are shown in table 2 and 3, respectively. Seller can offer a special discount for students. Student buyers receive a discount by showing their student ID (*red* card).

表一 Table 1：所有買家對某商品的市場需求 Distribution of Buyer Values--Entire Market

價格 Price	101	91	81	71	61	51	41	31	21	11
需求量 Quantity demanded	1	3	5	7	11	15	19	21	23	24

表二 Table 2：學生對某商品的市場需求 Distribution of Buyer Values--Students

價格 Price	101	91	81	71	61	51	41	31	21	11
需求量 Quantity demanded	0	0	0	0	2	4	7	9	11	12

表三 Table 3：社會人士對某商品的市場需求 Distribution of Buyer Values--Non Students

價格 Price	101	91	81	71	61	51	41	31	21	11
需求量 Quantity demanded	1	3	5	7	9	11	12	12	12	12

獨門生意 Monopoly：假設自己是唯一的賣家，面對表一描述的市場需求。請在記錄表上填寫的標價，預期的銷售數量(假設買家只要 1 元的利潤就會購買)與利潤。此利潤不列入計算。Suppose you are the only seller facing the market demand of table 1. Write down your selling price, expected quantity of sales (buyers will buy if they gain at least $1) and your profit in the record sheet as a practice.

強制性聯合壟斷 Enforceable Cartel：賣家可以先一起討論訂定每組的銷售**數量上限**，由實驗者嚴格執行。Sellers first jointly determine **quantity limits** for each seller (which are *strictly* enforced).

自願性聯合壟斷 Non-enforceable Cartel：賣家可以先一起討論訂定每組的銷售**數量上限**，但沒有約束力。Sellers first jointly determine **quantity limits** for each seller (which are *not* enforced).

價格歧視 Price Discrimination：拿到紅色牌的買家可享學生價。賣家可以先一起討論訂定每組對學生與社會人士的銷售**數量上限**，由實驗者嚴格執行。Student buyers can receive a special discount. Sellers first jointly determine student/non-student **quantity limits** for each seller (*strictly* enforced).

價格變更 Price Change：所有價格上的約定均不得強制執行，但在數量上限強制執行時，標價不得更改；在數量上限沒有約束力時，標價可以隨時更改，亦可針對特定買家給予特別優惠或秘密折扣。All price agreements are not enforceable, but when quantity limits are enforced, sellers cannot change their posted prices. When quantity limits are not enforced, sellers can change their prices at will. They can even offer special prices or secret discounts to specific buyers.

利潤記錄與結算：每回合結束後，請在記錄表上填寫價值(或成本)、交易價格(如果有成交)，並計算該回合的利潤。四回合的總利潤除以 20 則是您所獲得的分數。您的分數越高，成績越高。
Profit Calculation: After each round, please record your value (or cost), transaction price, and profit for this round. Your grade for this experiment is total profit divided by 20.

獨占市場實驗紀錄表 Record Sheet for "Monopoly, Cartel, and Price Discrimination"

Name
姓名：_____　　系級：_____　　學號：_____

姓名：_____　　系級：_____　　學號：_____

姓名：_____　　系級：_____　　學號：_____

回合#	交易規則 Trading Rule	價值 Value	交易價格 Price	利潤 Profit	備註 Memo
練習 Practice	獨門生意 Monopoly	價格 Price: ( )	數量 Quantity: ( )		不計入總利潤 Excluded
1	強制性聯合壟斷 Enforceable Cartel				
2	自願性聯合壟斷 Non-enforcement Cartel				
3	自願性聯合壟斷 Non-enforcement Cartel				
4	價格歧視 Price Discrimination				學生(是 / 否) Student (Y / N)

公司營運記錄表 Firms Record Sheet：第(round)_____回合

我的約定數量上限(my quantity limits)，學生(students)為_____，社會人士(non-students)為_____。
(請在備註欄打勾標記學生。尚未允許價格歧視時學生數量上限請寫零。Mark student buyers in Memo. Write "0" for student quantity limits when price discrimination is not allowed.)

買方學號 Buyer ID#	買方價值 Buyer Value	交易價格 Price	備註 Memo	買方學號 Buyer ID#	買方價值 Buyer Value	交易價格 Price	備註 Memo
本列收入小計 Sub-total：				本列收入小計 Sub-total：			

總收益 Total Revenue：　　　　　　　　　總支出 Total Cost：
$19 * _____(數量 Quantity Sold) = _____

賣出數量 Quantity Sold：　　　　　　　　利潤 Profit：

經濟學原理一課堂實驗(十)：獨占、聯合壟斷與價格歧視
Principles of Economics I - Classroom Experiment (10): Monopoly, Cartel, and Price Discrimination

獨占市場實驗觀察紀錄表 Observation Record Sheet for "Monopoly, Cartel, and Price Discrimination"

	Name		Major/Year		Student ID

姓名：＿＿＿＿＿＿＿＿ 系級：＿＿＿＿＿＿＿＿ 學號：＿＿＿＿＿＿＿＿＿＿

姓名：＿＿＿＿＿＿＿＿ 系級：＿＿＿＿＿＿＿＿ 學號：＿＿＿＿＿＿＿＿＿＿

姓名：＿＿＿＿＿＿＿＿ 系級：＿＿＿＿＿＿＿＿ 學號：＿＿＿＿＿＿＿＿＿＿

回合 Round	交易規則 Trading Rule	初始價格 Initial Price	中間價格 Intermediate Prices	收盤價格 Final Price	雙方喊價情形 Bidding Observations
練習 Practice	獨門生意 Monopoly	最佳價格 Price: ( )		最佳數量 Quantity: ( )	
1	強制性聯合壟斷 Enforceable Cartel				
2	自願性聯合壟斷 Non-enforcement Cartel				
3	自願性聯合壟斷 Non-enforcement Cartel				
4	價格歧視 Price Discrimination (學生 Students)				
	價格歧視 Price Discrimination (非學生 Non-Students)				

Answer the following questions 回答下列問題：

1. Predict the average price of Round 1 (Enforceable Cartel).
   請預測第一回合(強制性聯合壟斷)的平均交易價格為何。

2. What are the actual prices that took place in Round 1 (Enforceable Cartel)?
   請記錄第一回合(強制性聯合壟斷)所有實際上成交的交易價格是那些。

3. Predict the average price of Round 2 (Non-enforceable Cartel).
   請預測第二回合(自願性聯合壟斷)的平均交易價格為何。

4. What are the actual prices that took place in Round 2 (Non-enforceable Cartel)?
   請記錄第二回合(自願性聯合壟斷)所有實際上成交的交易價格是那些。

5. Is Round 3 (Non-enforceable Cartel) different from Round 2? 第三回合跟第二回合結果一樣嗎？

6. Predict the average price of Round 4 (Price Discrimination) for both students and non-students.
   請針對學生與社會人士分別預測第四回合(價格歧視)的平均交易價格為何。

7. What are the actual prices that took place in Round 2 (Non-enforceable Cartel)?
   請針對學生與社會人士分別記錄第四回合(價格歧視)所有實際上成交的交易價格是那些。

8. How does Cartel enforceability affect bidding and prices? What about price discrimination?
   聯合壟斷強制與否如何影響喊價情形與價格？價格歧視呢？