經濟學原理一課堂實驗(三)：市場交易 A──發現「看不見的手」(Seeing the Invisible Hand)
Principles of Economics I - Classroom Experiment (3): Market Trading A - Seeing the Invisible Hand

2-3 人一組參與交易實驗，分成三個市場，每個市場有 15 組買方、15 組賣方。每回合各組會拿到一張撲克牌 (J=11, Q=12, K=13, A=1)，代表可買賣一單位的商品。拿到紅色(方塊/紅心)是賣方，拿到黑色(黑桃/梅花)或鬼牌(大鬼=15, 小鬼=14)是買方。請收好這張牌使別人沒辦法看到牌面花色數字。
Students form groups of 2-3 to participate in three markets, each with 30 groups, 15 buyers and 15 sellers. In each round, each group can buy or sell one unit of the product. Each group will receive a playing card. If your card is red, you are a seller; if it is black or a joker, you are a buyer. Please keep your card as a secret.

賣方(紅)：「牌面數字**乘以十**」代表賣出商品所需付出的生產成本，因此賣出商品的<u>利潤</u>就是所賣出的價格減去「牌面上的數字**乘以十**」。舉例來說，如果拿到的卡片是紅心二，賣出商品的價格是三十元，那利潤就是（三十減二十等於）十元。如果賣出商品的價格是一百元，那利潤就是（一百減二十等於）八十元。如果沒有達成交易，該回合的利潤就是零，但也不必負擔任何成本。
Seller (Red): Your cost of production is the "number on your card multiplied by 10" (J=11, Q=12, K=13, A=1), so your <u>profit</u> is the difference between the selling price and this cost. For example, if your card is "2 of hearts," and the selling price is $30, your profit is $30 - $(2x10) = $10. If the selling price is $100, your profit is $100 - $(2x10) = $80. If you do not trade, you earn nothing (but incur no cost).

買方(黑)：「牌面數字**乘以十**」代表買到商品您會獲得的價值，因此買到商品的交易好處就是「牌面上的數字**乘以十**」減去買進商品的價格。舉例來說，如果拿到的卡片是黑桃九，買進商品的價格是四十元，那利潤(好處)就是（九十減四十等於）五十元。如果買進商品的價格是八十元，那利潤(好處)就是（九十減八十等於）十元。如果您沒有達成交易，您該回合的利潤(好處)就是零。
Buyer (Black): Your value of the product is the "number on your card multiplied by 10" (J=11, Q=12, K=13, A=1, red joker = 15, black joker = 14), so your <u>gain from trade</u> is the difference between this value and the price paid. For example, if your card is "9 of Spades," and the price is $40, then your gain is $(9x10) - $40 = $50. If the price is $80, then your gain is $(9x10) - $80 = $10. If you do not trade, you gain nothing.

交易規則 Trading Rules：

(A) 自由談判(Free Form Bargaining)：所有買家賣家有五分鐘的時間自由個別談判，談判時不能強迫，申報之後亦不能反悔。如果兩組達成協議，就請到前面來向實驗者申報交易並繳回撲克牌。實驗者於自由談判第二回合起，會在黑板上寫下並宣告交易價格。All buyers and sellers have five minutes to bargain with each other. Bargaining is voluntary, but you cannot reverse a trade once it is reported. After reaching a deal, please come to the front to report your trade and return your card. Starting from round 2, all prices will be announced and recorded on the blackboard.

(B) 看得見的手 (The Visible Hand) ：實驗者充當交易專員，聽取買賣雙方舉手喊價：「X 元買進」或「Y 元賣出」，並紀錄在黑板上。如果有買家或賣家願意接受另一方的喊價，則喊「成交」。成交雙方則到前面來向實驗者申報繳交撲克牌。每次成交後再重新開始下一單位的喊價。The experimenter acts as the specialist taking orders from both sides ("buy $X" or "sell $Y") and recording them on the blackboard. If you want to accept the other side's standing offer, simply shout "take" and come to the front to report your trade and return your card. [Use MobLab App for this!]

利潤記錄與結算：每回合後，買方請在記錄表上填入價值(賣方則填入成本)和成交價格，並計算本回合的利潤。最後的總利潤除以十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) and transaction price. Then, calculate your profit or gain for this round. Total profit divided by 10 will be your grade for this experiment.

發現「看不見的手」實驗紀錄表 Record Sheet for "Seeing the Invisible Hand"

Name
姓名：_____

Major/Year
系級：_____

Student ID#
學號：_____

姓名：_____

系級：_____

學號：_____

姓名：_____

系級：_____

學號：_____

回合 Round	交易規則 Trading Rule	買方報酬 Buyer Value	價格 Price	賣方成本 Seller Cost	本回合利潤 Profit (this round)	備註 Memo
1	自由談判 Free Form Bargaining					
2	自由談判 Free Form Bargaining					
3	自由談判 Free Form Bargaining					
4	看得見的手 Visible Hand					Use MobLab!
5	看得見的手 Visible Hand					Use MobLab!
6	看得見的手 Visible Hand					Use MobLab!
	總利潤 Total Profit					

Answer the following questions 回答下列問題：

1. How does prices (and bidding) change across rounds for each trading rule? 在同樣交易規則下，價格(與喊價情形)如何隨回合數增加改變？

2. Which trading rule is "better"? Can you come up with better rules? 哪一個交易規則比較好？你能想到更好的規則嗎？