INSTRUCTIONS

Introduction: This is an experiment in the economics of decision-making. Funding for this project has been provided by a variety of public funding agencies. If you read these instructions carefully and make good decisions, you might earn a considerable amount of money, which will be paid to you IN CASH at the end of today's session.

Overview: Today's session involves seller decisions in a market with posted prices. The session is divided into a series of trading periods. At the outset of each trading period, sellers are given unit costs. Sellers earn money by selling units at prices above costs. Trading proceeds as a two-step sequence: First sellers post a price. Second, after all prices are posted, purchase quantities and per period earnings are determined for each seller. To record your decisions, and to determine your earnings, you will use the spreadsheet on the computer in front of you.

Incentives and procedures are explained in more detail below.

1. Seller incentives. Sellers earn profits by selling units. Your profit per unit is the difference between the cost of a unit sold, and the price received from selling that unit. Thus your total profit is

   \[ \text{Profit} = (\text{Price per unit} - \text{Cost per unit}) \times \text{Number of units sold}. \]

   To make this clear, would some one give me a price per unit? (MONITOR ELICITS A PRICE) Now could someone give me a cost per unit? (MONITOR ELICITS A COST FROM A DIFFERENT SELLER). Finally, could someone give me a number of units sold? (MONITOR ELICITS A SALES QUANTITY). With these figures how much would a seller earn? (MONITOR ELICITS ANSWER).

   At the outset of each decision period, you and the other sellers are presented with unit costs (see cell C6 on your spreadsheet). You can produce an unlimited number of units at this cost per unit.

   Your job is to choose a price. Observe that higher prices will increase your earnings \textit{per unit sold}. However, as prices increase, the buyer can afford to purchase fewer units. Moreover, as your price increases relative to the other sellers, the buyer will substitute away from you and make more purchases from other sellers.

2. Buying Decisions. In today's session an experiment monitor makes buying decisions. After all sellers have posted prices, the buyer will make all profitable purchases possible, starting first with the unit that gives the most value per dollar spent, then the unit yielding the next most value per dollar spent and so on.

   Importantly, in today’s session, the units offered by each seller are distinguishable to the buyer, and units offered by one seller substitute imperfectly for units offered by another. For this reason, the buyer may purchase some units offered by a seller posting a price higher than the other sellers.

   Buyer decisions are dictated by a pre-specified relationship that determines the rate of substitutability between products. This relationship is affected only by sellers’ prices in a period.
3. Decision Making and Record Keeping. Each trading period proceeds in terms of a single row on the spreadsheet on the computer in front of you. Consider the row for period 0. As indicated in column C, your unit costs for period 0 are 100 cents. The period proceeds as follows:

a) First, pick a unit price. You may pick any price you like, but keep in mind that (a) you earn profits by selling units at prices above costs and (b) as your price rises, you will sell fewer units.

***ENTER A PRICE IN CELL B6 NOW***

2) Once all sellers have made a price decision, the monitor will record the prices and announce them publicly. Then the monitor will then determine sales quantities, which will be related to you privately. Record your sales quantity for the period in column D. Then record the prices chosen by you and the others.

***RECORD YOUR SALES QUANTITY IN CELL D6 AND THEN RECORD ALL PRICES IN CELLS H6, I6, J6 and K6 NOW ***

During the session you may find it instructive to refer to this history of prices. A graphical representation of this price history appears on the GRAPH page of your record sheet. You should feel free to refer to either price representation at any time.

3) Observe that column E computes your earnings for the period, while column F records your cumulative earnings, or a running balance for the experiment as a whole. Notice that per period earnings are simply the product of the number of units you sold in a period, and the difference between the per unit price and the per unit cost.

4) Once you have reviewed the results of your decisions, press CTRL/u to make decisions for the following period.

***PRESS CTRL/u NOW***
4) Final comments

a) Length of the market: Today’s session will consist of a large number of periods, conducted exactly as described above. We will not disclose in advance the final period.

b) Costs: In today’s sessions, each of you will have unit costs of 20 lab dollars per unit offered. These cost will remain constant throughout the session.

c) Demand: In today’s session, purchases will be made according to the same decision rule throughout the session. Importantly, you are all in symmetrical positions vis a vis each other. For example, a given price reduction by sellers 1, 2 and 3 will have the same effect on seller 4 as would the same price reduction by sellers 2, 3, and 4 on seller 1.

d) Decimal Entries: You made include one decimal places in your pricing decisions (for example, 500.2 or 15.4). Your sales quantities will be given to you in single decimal values as well (e.g. 100.5 units).

e) Lab dollar/U.S. dollar conversion rate: At the end of the session, you will be paid 1.5 cents for every 100 lab dollars earned in the laboratory. You total earnings for today’s session will be the sum of your earnings in the experiment, plus your $6 appearance fee.

f) Privacy. It is important that you not look on each other’s screens, and that you not talk to each other during the session.

Any questions?

To start the session press CTRL-U, and make your decision for the first period.
Extra instructions for monitor (NOT to be handed out to participants).

1) Each period, the monitor does the following.
   a) Walk around behind the sellers and record the prices.
   b) When all prices are recorded, go to your spreadsheet and record prices. Read the prices aloud as you enter them.
   c) Switch to the “outcomes” page, and record quantities
   d) Enter quantities in each seller’s s worksheet.
   e) After entering all quantities tell sellers

   “Look at your earnings for this period. When you are ready, hit control-U and make your decisions for the next period, period ___.”

   f) Go back to your computer. Switch back to the “decisions” page and hit CTRL U.

Other details:

a) After the fifth trading period ask each participant if they understand that the profit information provided in the per period profit column (column E) informs them of the profitability of their decisions. Show them the price graph

b) After period 30 announce the buyout.

In the sessions where the high earning seller buys out the low earning seller, do not reveal your selection mechanism. Say the following:

A merger has just occurred! For the remainder of the session, Seller ___ will make the decisions both on his/her own machine and on the machine for seller ______. This seller must enter prices for both markets each period. Seller ___ and will earn the sum of profits from both machine each period.

In compensation seller ___ will receive $7 from the monitor in addition to their earnings for the first 30 periods and their $6 appearance fee. If seller ___ would come to the front of the room now, (s)he will be paid, and free to go.

In the sessions where the acquired is randomly selected, and where the acquirer is randomly selected as one of the sellers other than the high earner, do the following.

A merger will now occur. For the remainder of the session, a randomly drawn sellers Seller ___ will be acquired. This seller will be receive $7 from the monitor in addition to their earnings for the first 30 periods and their $6 appearance fee. The acquired sellers is seller _____ (SELECT ONE OF SELLERS DRAW A NUMBERED CARD) If seller ___ would come to the front of the room now, (s)he will be paid, and free to go.

The acquiring seller will now be selected. (SELECT ONE OF SELLERS DRAW A NUMBERED CARD. REMOVE THE CARD FOR THE SELLER WITH THE HIGHEST EARNINGS FOR PERIODS 1-30 IF THIS SELLER HAS NOT ALREADY BEEN DRAWN) For the remainder of today’s session Seller ___ will make the decisions both for his/her own machine and for the seller ___’s machine. Seller ___ (the acquirer) must enter prices for both markets each period. Seller ___ (the acquirer) will earn the sum of profits on both machines each period.
After paying off the seller position the “two-monitor” seller so that machines are adjacent. (This may require that you transfer some files across machines.)

c) When you install the record sheets, you should customize the record sheet for each participant by making the black bolded line on his or her price graph illustrate that seller’s decisions. You should also change the seller identifier (S1, S2, etc.) in the upper left corner of that seller’s spreadsheet.