

Experiment Instructions

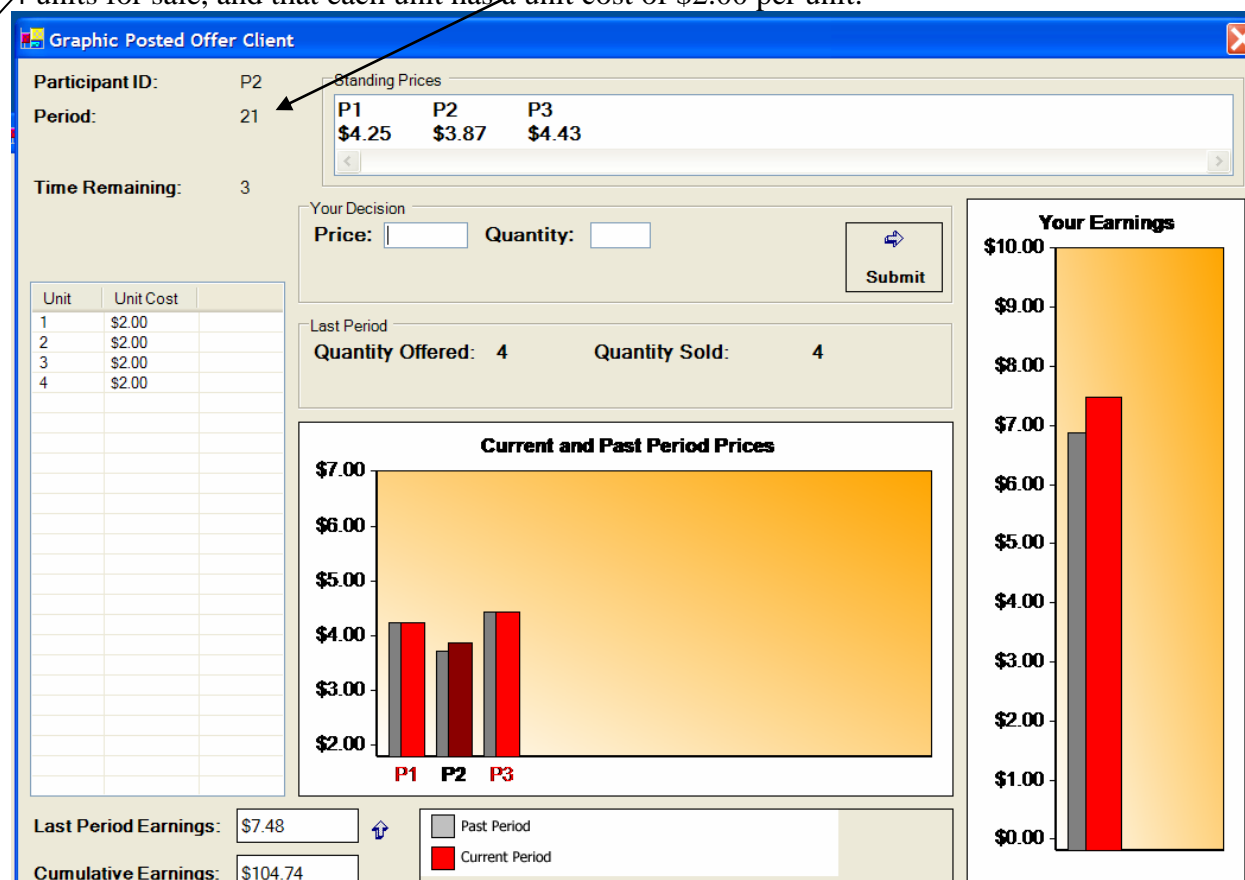
Overview: This is an experiment in the economics of decision-making. Various research foundations have provided funds for this research. The instructions are simple, and if you follow them carefully and make good decisions, you may earn a considerable amount of money that will be paid to you in CASH at the end of the experiment. Your earnings will be determined partly by your decisions and partly by the decisions of others.

General Incentives. In today's experiments, sellers, endowed with unit costs, offer "units" for sale to a simulated buyer. The sellers earn money by selling units to the buyer at prices in excess of his or her unit costs. Importantly, sellers incur costs only for the units that the buyer purchases. Sellers bear no costs for unsold units.

Trading. Today's market will consist of a number of *trading periods*. At the outset of each period sellers are given unit costs that the sellers will offer for sell to an automated buyer. Trading follows a simple two-step process. First, the sellers are given the chance to make a pricing decision. Second, after a pre-set time limit, the buyer makes all purchases possible from the seller at the posted prices. Then sellers earning are calculated and a new period begins.

The trading periods in the first part of today's session will last 12 **seconds**. In this first sequence, if a seller does not change his or her price prior to the expiration of the period, the seller's price from the previous period will automatically be carried forward.

Specific Instructions. Participants in today's experiment are grouped into markets of 3 sellers. The screen display below illustrates the screen for a seller P2. Please take a moment now to look in the upper left corner of your computer screen to identify your seller number in today's market. The illustration shows a market with 3 seconds remaining in period 21. Notice that seller P1 can offer up to 4 units for sale, and that each unit has a unit cost of \$2.00 per unit.



In the previous period, (period 20) seller P2 posted a price of \$3.87 and sold all four the units he could profitably offer at that price. The seller earned \$7.48 in period 20. Period earnings are the difference between the revenues from selling 4 units at a price of \$3.87 per unit and the costs of the 4 units sold or

Total Revenue	-	Total Costs	=	Earnings
$\$3.87 \times 4$		$(\$2.00 + \$2.00 + \$2.00 + \$2.00)$		
\$15.48	-	\$8.00	=	\$7.48

Notice that the bar graphs on the screen allow you to track price and earnings changes relative to the preceding period. In the figure, for example, notice that seller P1 increased his price relative to period 2, and as a consequence his earnings increased.

Price Posting. At the start of a session, you have, by default, a posted price of zero and you offer no units. To change your price, simply click on the price box, and type in a price. The computer will automatically enter all units you can profitably sell that price in the "offer quantity: box. For example, suppose that seller P2 decided to post a price of \$4.31. By typing in 4.31 in the price box and then clicking the 'submit' box the price would take effect at the end of the trading period

If you do not wish to change your price in a period, you need do nothing your standing price will be repeated in the following period.

Market Information: In today's market, the buyer will purchase 7 units at any price of \$6.00 or less. The buyer will purchase the lowest priced units first. In the case of a tie, the buyer will rotate purchases as evenly as possible among the sellers posting the same price.

You and the other sellers can offer 4 units each at a cost of \$2.00 per unit. Thus, in total the sellers can offer 12 units per period to the market.

Observe then that in today's market, the seller posting the highest price will sell zero units, the seller posting the second highest price will sell 3 units and the seller posting the lowest price will sell 4 units.

Minimum Price Restriction. You will not be allowed to post a price less than \$3.00.

Summary: Your job is make as much money as possible.

This is the first of three sequences in today's experiment. This sequence will consist of 120 trading periods. If you finish ahead of the others, please wait patiently for the start of the next sequence.

You will now be paid for your decisions. Your laboratory earnings will be converted to U.S. currency at the rate of \$100 lab = \$1 U.S.

Any questions?

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Sequence 2 Instructions.

Now we will begin a second sequence. Procedures in this second sequence are exactly like those in the first sequence, in particular, your unit cost conditions, as well as aggregate supply and aggregate demand conditions will remain the same as in the previous sequence.

Specifically, the buyer will purchase 7 units at any price of \$6.00 or less. The buyer will purchase the lowest priced units first. In the case of a tie, the buyer will rotate purchases as evenly as possible among the sellers posting the same price.

You and the other sellers can offer 4 units each at a cost of \$2.00 per unit. Thus, in total the sellers can offer 12 units per period to the market.

Observe then that in today's market, the seller posting the highest price will sell zero units, the seller posting the second highest price will sell 3 units and the seller posting the lowest price will sell 4 units.

Also as before you will not be allowed to post a price less than \$3.00.

This sequence, however will have the following differences.

1) Forecasting game. In addition to posting prices and earning profits from selling units, in this second sequence you will also play a forecasting game. The game is simple. Each period, after making your pricing decision you must also guess the highest *maximum* price that the *other* two sellers will post in your market in the upcoming period. Figure 2 illustrates

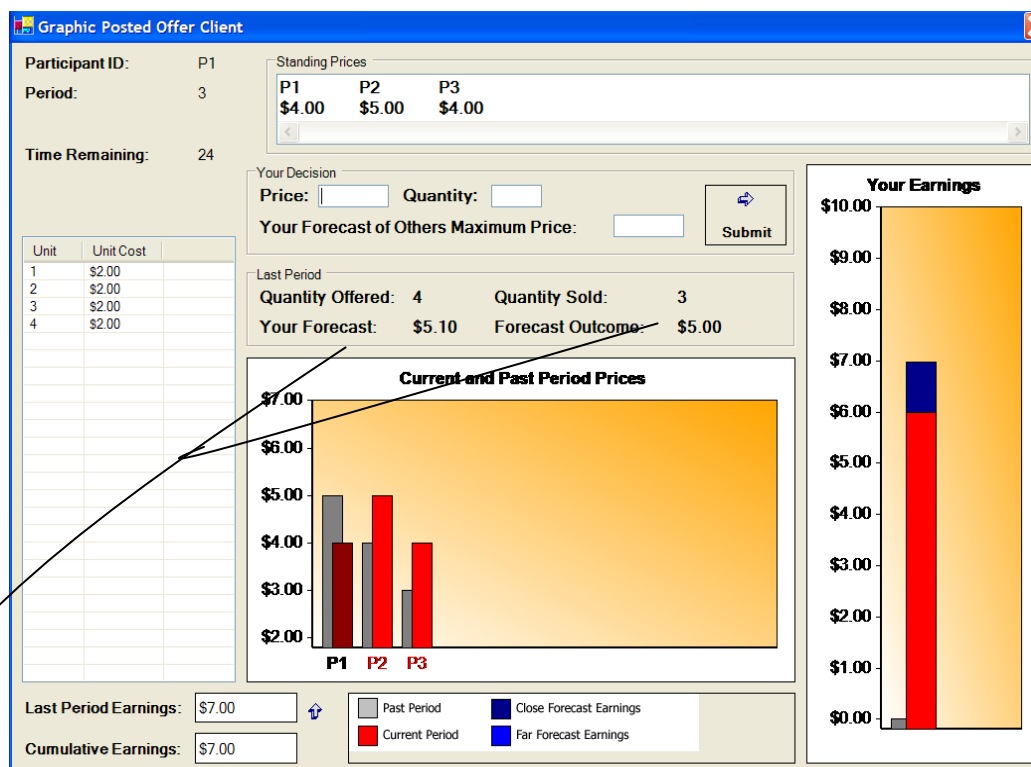


Figure 2.

Notice in the figure that a new entry box appears. Each period, after you post a price, you must enter a forecast of the other sellers price for the upcoming period. Forecasting accuracy will pay off.

- If your forecast is within \$.25 of the the maximum price posted by others, your period earnings will be supplemented by \$.50 (Lab).
- If your forecast is within \$.10 of the maximum price posted by others, your period earnings will be supplemented by \$1.00 (Lab).

Notice for example, in the period 2 seller P1 forecast a maximum other price of \$5.10. The highest other price in period 2 was \$5.00, by posted by P2. Since P1's forecast was within \$.10 of the actual maximum other price, P1's earnings for the period were supplemented by \$1.00, as indicated by the dark blue segment on the earnings graph. Had P1 been between \$.11 and \$.25 of the actual price, P1's earnings would have been supplemented by \$.50, and would be highlighted by a light blue segment on the earnings graph.

Other details

- 1) In this segment, the set of sellers with whom you will be matched will differ from those with whom you were matched in the first segment. You will remain matched with these same sellers throughout this sequences
 - 2) The length of periods will be increased to a maximum of 18 seconds.
 - 3) Your price decisions do not carry over from period to period. If you do not enter a new price and forecast, your entries for the perid will revert to zero.
 - 4) This sequence will consist of 120 periods.
- Any questions?