

## **Experiment Instructions**

You are about to participate in an experiment in the economics of decision making. If you follow these instructions carefully and make good decisions you will earn a considerable amount of money.

In each round of today's session you will be competing with two other bidders to purchase a unit of a fictitious asset. You will be bidding in an auction against two computerized competitors. The computerized competitors have been programmed to bid in a way that would maximize their expected earnings when they bid against likewise programmed competitors. You will make a total of 100 bidding decisions.

### **How You Make Money**

In the beginning of each bidding decision, you will learn your resale value for a fictitious asset. The resale values for your two computerized opponents have already been predetermined for all auctions in today's session, and they are integers from 1 to 100, with each integer being equally likely. Their resale values in one round have no correlation with their resale values in any other round or with the resale values of any of the other bidders (in other words, all resale values have been drawn independently). The bids of the computerized bidders have also been determined, and they cannot be affected by your decisions today.

Your own value for the asset will be 90 in 20 bidding decisions, 80 in 20 bidding decisions, 70 in 20 bidding decisions, 60 in 20 bidding decisions, and 50 in 20 bidding decisions. You will have the same value in 20 consecutive bidding decisions and then the value will change (and will then stay at this new value for the next 20 consecutive auctions, etc.). The order of your resale values has been determined randomly.

You make one bidding decision for a block of 10 consecutive auctions. In each of those 10 auctions, your competitors will have different values and place different bids, although your own bid and value will remain the same.

You make money by winning the auction at a favorable price. If you win an auction at a price that is below your resale value, then your profit is:

$$\text{Your resale value} - \text{Auction Price.}$$

For example, if your resale value is 60 and you win the auction at a price of 45, then your profit in this auction is  $60 - 45 = 15$ . Note, if you win the auction at an unfavorable price (at a price that is above your resale value), you will lose money. Because you will know your resale value prior to bidding you can avoid the possibility of losing any money in an auction by not bidding at unfavorable prices. If you do not win the auction, your profit for the round is 0.

## **The Mechanics of the Auction**

You bid in the auction by typing your bid into a box on your screen and clicking the “Submit” button.

Your two computerized opponents have been programmed to bid in the beginning of each round, before you have entered your bid. Please note that just as you are not aware of the bid amounts your computerized opponents have placed, neither are they aware of your bid amount at the time their bids are placed.

The bidder who places the highest bid wins the auction and pays the amount they bid. The winner earns Resale value – Purchase Price. The other two bidders who did not win the auction earn zero.

### **Example**

Suppose your resale value is 80, and you place the bid of 65.

Suppose the two bids your computerized opponents placed are 47 and 51. In this case, because your bid of 65 is higher than the other two bids, you win the auction, and earn  $80 - 65 = 15$ . The two computerized bidders earn 0.

Now suppose that instead, the two bids placed by the computerized bidders were 47 and 66. In this case, the bidder who bid 66 wins an auction and pays 66. You do not win the auction, and earn 0.

### **Summary Information You Will See at the End of Each Auction**

After each bidding decision (at the end of each block of 10 auctions, after you have placed your own bid) you will see the following information:

- Your own resale value
- Your own bid amount

For each of the 10 auctions:

- The selling price
- The second highest bid amount
- Your profit and whether or not you won

In addition, the computer will calculate and display for you, in each of the 10 auctions:

- Money left on the table, which is always 0 if you DO NOT win the auction and is your bid – the second highest bid when you do win the auction.
- Missed opportunity to win, which is always 0 when you DO win as well as when your resale value is below the highest bid amount the auction, and otherwise it is Your Resale Value – Winning Bid Amount.

You will also see the average selling price, the average second highest bid, the number of times you won, the total profit, the total money left on the table, and the total missed opportunity to win for ALL 10 auctions.

**How the Session Will Progress**

The session will include 1,000 auctions in blocks of 10. You will make 100 bidding decisions, and each decision will be used in 10 consecutive auctions. You will have the same resale value for each 20 consecutive decisions (200 consecutive auctions).

Your earnings from all auctions will contribute to your total earnings from the session. Remember that you will be bidding against two computerized competitors in all 1,000 auctions, and the resale values of your competitors will be integers from 1 to 100, each integer equally likely. The resale values of your competitors will change in each auction (even when your own resale value stays the same).

**How You Will Be Paid**

At the end of the session, the computer will calculate the total profit you earned in all auctions and will convert it to U.S. dollars at the rate of 1 cent per 10 tokens. Your dollar earnings will be added to your \$5 participation fee and displayed on your computer screen. You will receive an Amazon.com gift card in this amount. The gift card will be emailed to you within 2 business days after the session ends.