

INSTRUCTIONS

This is an experiment in the economics of market decision making. The National Science Foundation has provided funds for conducting this research. The instructions are somewhat more complicated than usual but if you are careful and make good decisions, you should still be able to earn a **CONSIDERABLE AMOUNT OF MONEY**, which will be **PAID TO YOU IN CASH** at the end of the experiment.

In this experiment, we will create a market in which you will act as bidders in a series of auctions. There will be six different items for sale in each auction - items A, B, C, D, E and F – with one unit of each item for sale in each auction. These items will be sold using a combinatorial clock auction (CCA) procedure to be described shortly.

1. **Value of the items for sale:** Each item up for bid will have a known value to you of purchasing that item. The cost of purchasing each item will be determined by its auction cost less the cost of shipping the items for delivery. There will be a fixed cost for shipping items which will be the same regardless of the number of items you purchase.

You will be informed of your values for all items up for auction along with your shipping costs. The following examples illustrate this in terms of what your computer screens will show:

Example 1:

This period's valuation								
ItemA	ItemB	ItemC	ItemD	ItemE	ItemF	Preowned Items	Container Capacity	Container Unit Cost
87.0	74.0	77.0	0.0	0.0	0.0	0	3	11.0

This bidder has values for $A = 87$, $B = 74$, $C = 77$ with zero value for items D, E and F, along with a container cost of 11 for shipping 3 units.

Example 2:

This period's valuation								
ItemA	ItemB	ItemC	ItemD	ItemE	ItemF	Preowned Items	Container Capacity	Container Unit Cost
51.0	100.0	98.0	102.0	69.0	60.0	0	6	70.0

This bidder has positive value for all 6 items along with a container cost of 70 for shipping the 6 units.

Note that your values for different items as well as the cost of shipping those items will change from auction to auction and will rarely, if ever, be the same for different bidders within a given auction.

Properties of the CCA: Items will be sold using a combinatorial clock auction (CCA) procedure. The principle underlying the CCA is that each bid represents a bid for a package of items. The bidder in Example 2 can bid on the package containing all 6 items as well as packages containing subsets of items; e.g., the package containing A, C, and E or any other combination including a package containing A alone or B alone, etc. The bids are what are called XOR package bids – meaning that only one of your bids can be winning bid and, if the bid is a winning bid, you get *all* the items in the package.

Bids of this sort are particularly valuable in cases such as this when there is a fixed cost to shipping the items regardless of the number of items purchased. Take Example 1 above and assume for the moment that the prices of $A = 85$, $B = 70$, and $C = 50$. It does not pay to buy A or B *alone* at these prices since after subtracting out shipping costs you would lose money by purchasing A alone ($87-85-11 = -9$) or purchasing B alone ($74-70-11 = -7$) or purchasing the package containing both A and B (profit of -4 in this case). Purchasing C alone you would yield a positive profit ($77-50-11 = 16$). But since the prices of A and B are below their value and it's the same cost to ship C alone or A, B and C if you were to buy all 3 at these prices you would earn a profit of 22. (Note, in the experiment the software will provide you with the tools to do all of these calculations painlessly.) Package bidding allows you to sensibly bid for A, B and C as a package at these prices as well as to bid for C alone.

Why should you want to bid on smaller packages that are profitable, especially early on, in addition to larger packages which are often more profitable? Because both offer you profit opportunities and the package bidding algorithm is such that you don't know at the time you bid which package you are more likely to wind up with at the end of the auctions. In particular, as we'll describe shortly, the auction rules make it possible that bids for individual items or smaller packages (for example, A and C or A and B) when prices are low might eventually be a winning bid *at those prices* even if prices have increased substantially. That is, by bidding on individual items or small packages, when prices are low enough to makes such bids profitable, you create a *chance* that you will be able to buy those items at those prices.

What should you do? If we knew this we would not have to conduct the experiment. So, you'll need to exercise your judgment on how to bid in the auction (and what this experiment is about is how people actually bid in these complicated auctions).

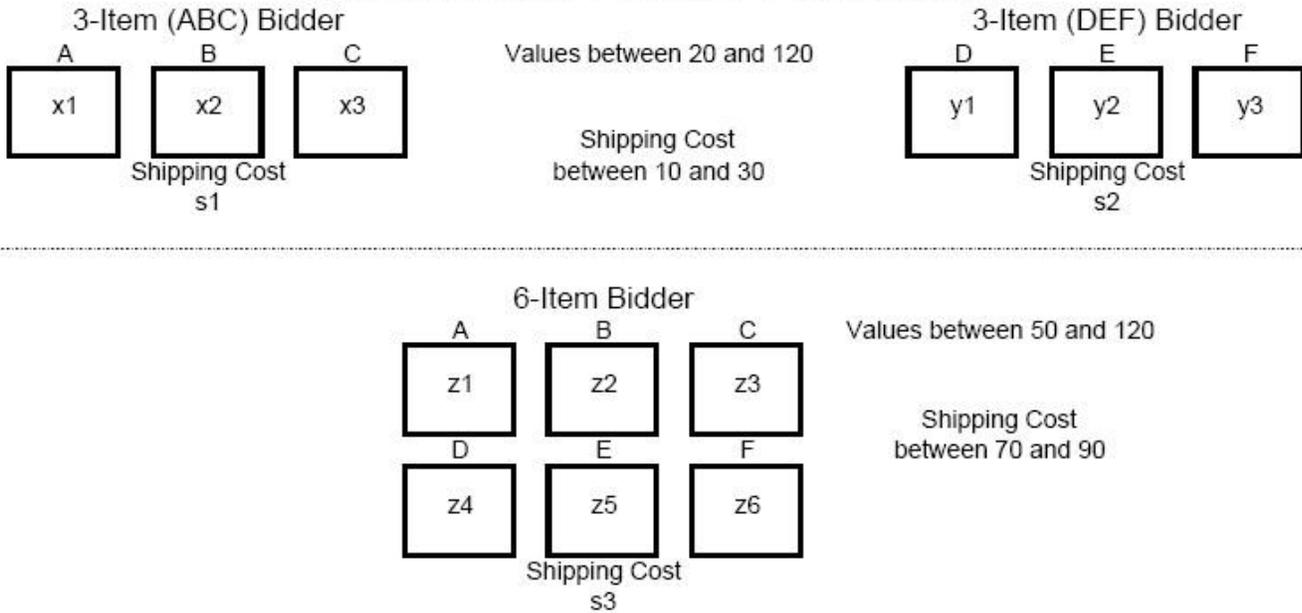
The CCA relies on a computational algorithm to determine who gets the items. Basically, the computational algorithm takes all the bids placed by all the bidders and looks for the set of bids that will *maximize* seller revenue. *In doing this the algorithm will look at all current bids as well as all past bids to find the combination of bids that maximizes seller revenue.* This is necessary because with package bidding there are typically "fitting" problems; e.g., someone might place a very high bid on a package containing items A, B, C, D and E but since she has no value (or very low value) for F the computer will want to find someone who values F more than she does as this fits well with the package A, B, C., D, E **and** maximizes revenue. In doing this it may need to call on an earlier bid for F. (Note, when using a bid from a previous round the computer uses the price you were willing to pay *from that earlier round*).

CCA procedures: The auction will proceed in rounds, with each round lasting up to 30 seconds during which you can place bids. As long as there is more demand for each item than the supply of that item (i.e., there is excess demand for the item) the auction will continue and the prices for the items with excess demand will increase.

Once **two consecutive** rounds have gone by without any bidding activity the auction will end with each item sold to the high bidder at those prices.

Most of today will be spent familiarizing you with the auction procedures, including a few practice auctions. For today's experiment and those of the next two sessions there will be 3 bidders in each market. Two of the bidders will have positive values for 3 of the items – one with value for A, B and C and one with value for D, E and F – along with a fixed cost for shipping the items and zero value for the remaining 3 items. The third bidder will have positive value for all the items, but since 6 items take up more room in a shipping van, he/she will have a higher fixed cost of shipping the items.

Valuations for Today's Experiment



Item values for the 3-Item bidders will be integer values between 20 and 120 with shipping costs consisting of integer values between 10 and 30. Item values for the 6-Item bidder will be integer values from the interval 50 and 120, with shipping costs consisting of integer values between 70 and 90.

Your role as a 3-Item or 6-Item bidder will change randomly from auction to auction as will the other bidders in your market. Item values will also change from auction to auction along with your shipping costs. Item values and shipping costs will be selected so that we can explore what happens under a number of different valuation profiles, while providing you with what we anticipate will be respectable earnings when *averaged* over all the auctions within a given experimental session.

There are a total of _____ of you in the room so we will be conducting _____ auctions simultaneously. Who will be assigned to bid in your auction will be determined randomly for each auction so it is very unlikely you will be bidding against the same people in any two consecutive auctions. One side effect of this is that we must wait for all the auctions to be completed before moving on to another auction. So you may be idle for a bit after your auction has finished.

In addition if there are an uneven number of subjects present relative to the number of bidders in each auction, you may be on standby for a given auction. But you will be guaranteed to be active in the next auction.

Today's session will consist of a series of dry runs (no cash at stake) so you can play with the software and fully understand it. You will each be given starting capital balances of 150 experimental currency units (ECUs). (All values in the session will be in terms of ECUs). Any profits earned in an auction will be added to your starting capital balances. Any losses will be subtracted from it. Your earnings, if these were the "wet" runs that we will conduct in the next two sessions, would consist of your end of session balance, less 130 ECUs, and would be converted into US Dollars at a *minimum* rate of 1 ECU = 0.1 US dollars.

For today's session you will all be paid a flat fee of \$15.

Dry run instructions:

Login instructions: *Will use their OSU e-mail addresses as their ID number. Will also have to post which experiment number working with.*

This is a dry run. Please don't do anything until we ask you to do so, so that we can familiarize you with the information layout. Also please turn off your cell phones. If you have questions please raise your hand and address your questions to us. Also please refrain from talking to each other as it will compromise the integrity of the experiment which may force us to shut it down.

Experiment: 0044		Design: Combinatorial Clock		Valuation: Capacities		Date Started:						
Period	Round	Experiment Status		Round Duration	Round Time Remaining	Experiment Starting (\$)	Current Balance (\$)	Profit / Loss (\$)				
1	1	Ready to start round		25	25	100.0	100.0	0.0				
Current auctioneer offer												
Item:	A	B	C	D	E	F						
Offer quantity:	1	1	1	1	1	1						
Current round price:	5	5	5	5	5	5						
Price increment:	---	---	---	---	---	---						
Currently demanded bids												
Package		Value		Cost		Potential Profit						
0, 0, 0, 0, 0, 0		0.0		0.0		0.0						
This period's valuation												
ItemA	ItemB	ItemC	ItemD	ItemE	ItemF	Preowned Items	Container Capacity	Container Unit Cost				
87.0	74.0	77.0	0.0	0.0	0.0	0	3	11.0				
Analytics		Previous period results										
	Package	Value	Current cost	Current profit	Profit/ value	Last round submitted	Past cost	Past profit	Decrease profit	Empty slots	Fixed cost/ gross value	
add	<input checked="" type="checkbox"/>	1, 1, 1, 0, 0, 0	227.0	15.0	212.0	0.934	none	0.0	0.0	0.0	0	0.048
add	<input checked="" type="checkbox"/>	1, 0, 1, 0, 0, 0	153.0	10.0	143.0	0.935	none	0.0	0.0	0.0	1	0.072
add	<input checked="" type="checkbox"/>	1, 1, 0, 0, 0, 0	150.0	10.0	140.0	0.933	none	0.0	0.0	0.0	1	0.073
add	<input checked="" type="checkbox"/>	0, 1, 1, 0, 0, 0	140.0	10.0	130.0	0.929	none	0.0	0.0	0.0	1	0.079
add	<input checked="" type="checkbox"/>	1, 0, 0, 0, 0, 0	76.0	5.0	71.0	0.934	none	0.0	0.0	0.0	2	0.145
add	<input checked="" type="checkbox"/>	0, 0, 1, 0, 0, 0	66.0	5.0	61.0	0.924	none	0.0	0.0	0.0	2	0.167
add	<input checked="" type="checkbox"/>	0, 1, 0, 0, 0, 0	63.0	5.0	58.0	0.921	none	0.0	0.0	0.0	2	0.175
add	<input type="checkbox"/>	1, 1, 1, 1, 0, 0	216.0	20.0	196.0	0.907	none	0.0	0.0	0.0	2	0.102
add	<input type="checkbox"/>	1, 1, 1, 0, 1, 0	216.0	20.0	196.0	0.907	none	0.0	0.0	0.0	2	0.102
add	<input type="checkbox"/>	1, 1, 1, 0, 0, 1	216.0	20.0	196.0	0.907	none	0.0	0.0	0.0	2	0.102
add	<input type="checkbox"/>	1, 1, 1, 1, 1, 0	216.0	25.0	191.0	0.884	none	0.0	0.0	0.0	1	0.102
add	<input type="checkbox"/>	1, 1, 1, 1, 0, 1	216.0	25.0	191.0	0.884	none	0.0	0.0	0.0	1	0.102
add	<input type="checkbox"/>	1, 1, 1, 0, 1, 1	216.0	25.0	191.0	0.884	none	0.0	0.0	0.0	1	0.102
add	<input type="checkbox"/>	1, 1, 1, 1, 1, 1	216.0	30.0	186.0	0.861	none	0.0	0.0	0.0	0	0.102
add	<input type="checkbox"/>	1, 0, 1, 1, 0, 0	153.0	15.0	138.0	0.902	none	0.0	0.0	0.0	0	0.072
add	<input type="checkbox"/>	1, 0, 1, 0, 1, 0	153.0	15.0	138.0	0.902	none	0.0	0.0	0.0	0	0.072
add	<input type="checkbox"/>	1, 0, 1, 0, 0, 1	153.0	15.0	138.0	0.902	none	0.0	0.0	0.0	0	0.072
add	<input type="checkbox"/>	1, 1, 0, 1, 0, 0	150.0	15.0	135.0	0.900	none	0.0	0.0	0.0	0	0.073
add	<input type="checkbox"/>	1, 1, 0, 0, 1, 0	150.0	15.0	135.0	0.900	none	0.0	0.0	0.0	0	0.073
add	<input type="checkbox"/>	1, 1, 0, 0, 0, 1	150.0	15.0	135.0	0.900	none	0.0	0.0	0.0	0	0.073
add	<input type="checkbox"/>	0, 1, 1, 1, 0, 0	140.0	15.0	125.0	0.893	none	0.0	0.0	0.0	0	0.079

Please look at your screens now. At the upper left hand corner it shows we are in Period 1, Round 1 meaning

we are in the first round of the Auction 1 (Period 1). Round duration shows how much time you have to place a bid. (This will start at 30 seconds in the early rounds of each auction.) Right next to that – Round Time Remaining – shows how much time is left to make your bid. Next to that is your starting capital balance – 100 ECUs in this example – followed by your current balance (your starting balance plus any profits or losses from previous auctions), followed by the profit or loss from the current auction. The clock is paused right now so we can go through your screens with you.

Right below this are the items for sale – along with the number of units of each item for sale (Offer quantity) – which will always be 1 – followed by the current round price and the price increment – the price increase from the last round to the current round. Prices will start at 5 and increase by 5 between all rounds.

Right below this is your currently demanded bid – the bid you have made in this round of the auction. This is 0 for all units as no bids have been placed yet.

Below this is the information regarding your value for each item, along with your shipping cost. This example is for the 3-item bidder ABC with values for $A = 87$, $B = 74$, $C = 77$, and $D = E = F = 0$ and a shipping cost of 11. (*Note – the experimenter will be pointing to these items on the slide as he goes through the example.*)

Below this is the list of *all* possible bids this bidder could make. The list is quite large even for this simple case of six items for sale. To help you make sense of this we have provided a number of possible “sorts” you can conduct. Quite frankly we don’t know how you can bid sensibly without making use of one or more of the sorts, in particular using the “Current profit” sort option (*E points to this*). If you click on this it will sort packages based on their profitability at current round prices, with the most profitable packages listed first.

One advantage of sorting based on Current Profit is that you can immediately identify if there are any more profitable packages to bid on by looking at the package at the top of your list or those immediately below it. Also note that once you have clicked on a particular sort – it will update automatically between rounds – as long as you choose to continue to use that sort option.

We employ a double sort option. Packages with a check mark next to them are sorted first, followed by all other packages. The check marks are used for the 3-item bidders to distinguish packages that have items with *all* positive value (packages containing A, B or C in this case). Later on for 6 item bidders, any package bid on will contain a check mark and will be sorted first (as presumably these are packages of primary interest to you). Finally, any bids that would yield negative profit at current prices will have the “current profit” entry highlighted in red. This is designed to make it easier to avoid losses.

There are a number of other sort options available as well – sorting based on current cost, current value, etc. If you are interested in maximizing your earnings (and we hope that you are) we would recommend focusing on the Current Profit sort option first and then employing any others you might think helpful.

Please play with these sort options a bit a bit to see how they work. Any questions?

To make your bid(s) just click on the “add” next to the package(s) you want to bid on. When you do this the cost of the bid will be automatically calculated for you based on current prices along with the potential profit should you earn that package. This slide shows an example of this where bids were placed on 3 packages – the package ABC, a bid on item A alone and a bid on the package containing items B and C. These are listed under currently demanded bids along with the value of each package (net of shipping costs), the current cost for the items in the each package, and the potential profit from earning each possible package. (*E walks them through this.*) Note, the default bid is a bid for the 0, 0, 0, 0, 0, 0 package – which is always present. If you don’t bid on anything before the round ends this will be your bid for that round.

Experiment: 0044		Design: Combinatorial Clock		Valuation: Capacities		Date Started:					
Period	Round	Experiment Status		Round Duration	Round Time Remaining	Experiment Starting (\$)	Current Balance (\$)	Profit / Loss (\$)			
1	1	Clock Paused		25	24	100.0	100.0	0.0			
Current auctioneer offer											
Item:	A	B	C	D	E	F					
Offer quantity:	1	1	1	1	1	1					
Current round price:	5	5	5	5	5	5					
Price increment:	---	---	---	---	---	---					
Currently demanded bids											
	Package	Value	Cost	Potential Profit							
	0, 0, 0, 0, 0, 0	0.0	0.0	0.0							
	1, 1, 1, 0, 0, 0	227.0	15.0	212.0							
	1, 0, 0, 0, 0, 0	76.0	5.0	71.0							
	0, 1, 1, 0, 0, 0	140.0	10.0	130.0							
This period's valuation											
ItemA	ItemB	ItemC	ItemD	ItemE	ItemF	Preowned Items	Container Capacity	Container Unit Cost			
87.0	74.0	77.0	0.0	0.0	0.0	0	3	11.0			
Analytics		Previous period results									
	Package	Value	Current cost	Current profit	Profit/ value	Last round submitted	Past cost	Past profit	Decrease profit	Empty slots	Fixed cost/ gross value
remove	<input checked="" type="checkbox"/> 1, 1, 1, 0, 0, 0	227.0	15.0	212.0	0.934	none	0.0	0.0	0.0	0	0.048
add	<input checked="" type="checkbox"/> 1, 0, 1, 0, 0, 0	153.0	10.0	143.0	0.935	none	0.0	0.0	0.0	1	0.072
add	<input checked="" type="checkbox"/> 1, 1, 0, 0, 0, 0	150.0	10.0	140.0	0.933	none	0.0	0.0	0.0	1	0.073
remove	<input checked="" type="checkbox"/> 0, 1, 1, 0, 0, 0	140.0	10.0	130.0	0.929	none	0.0	0.0	0.0	1	0.079
remove	<input checked="" type="checkbox"/> 1, 0, 0, 0, 0, 0	76.0	5.0	71.0	0.934	none	0.0	0.0	0.0	2	0.145
add	<input checked="" type="checkbox"/> 0, 0, 1, 0, 0, 0	66.0	5.0	61.0	0.924	none	0.0	0.0	0.0	2	0.167
add	<input checked="" type="checkbox"/> 0, 1, 0, 0, 0, 0	63.0	5.0	58.0	0.921	none	0.0	0.0	0.0	2	0.175
add	<input type="checkbox"/> 1, 1, 1, 1, 0, 0	216.0	20.0	196.0	0.907	none	0.0	0.0	0.0	2	0.102
add	<input type="checkbox"/> 1, 1, 1, 0, 1, 0	216.0	20.0	196.0	0.907	none	0.0	0.0	0.0	2	0.102
add	<input type="checkbox"/> 1, 1, 1, 0, 0, 1	216.0	20.0	196.0	0.907	none	0.0	0.0	0.0	2	0.102
add	<input type="checkbox"/> 1, 1, 1, 1, 1, 0	216.0	25.0	191.0	0.884	none	0.0	0.0	0.0	1	0.102
add	<input type="checkbox"/> 1, 1, 1, 1, 0, 1	216.0	25.0	191.0	0.884	none	0.0	0.0	0.0	1	0.102
add	<input type="checkbox"/> 1, 1, 1, 0, 1, 1	216.0	25.0	191.0	0.884	none	0.0	0.0	0.0	1	0.102
add	<input type="checkbox"/> 1, 1, 1, 1, 1, 1	216.0	30.0	186.0	0.861	none	0.0	0.0	0.0	0	0.102
add	<input type="checkbox"/> 1, 0, 1, 1, 0, 0	153.0	15.0	138.0	0.902	none	0.0	0.0	0.0	0	0.072
add	<input type="checkbox"/> 1, 0, 1, 0, 1, 0	153.0	15.0	138.0	0.902	none	0.0	0.0	0.0	0	0.072
add	<input type="checkbox"/> 1, 0, 1, 0, 0, 1	153.0	15.0	138.0	0.902	none	0.0	0.0	0.0	0	0.072
add	<input type="checkbox"/> 1, 1, 0, 1, 0, 0	150.0	15.0	135.0	0.900	none	0.0	0.0	0.0	0	0.073
add	<input type="checkbox"/> 1, 1, 0, 0, 1, 0	150.0	15.0	135.0	0.900	none	0.0	0.0	0.0	0	0.073
add	<input type="checkbox"/> 1, 1, 0, 0, 0, 1	150.0	15.0	135.0	0.900	none	0.0	0.0	0.0	0	0.073
add	<input type="checkbox"/> 0, 1, 1, 1, 0, 0	140.0	15.0	125.0	0.893	none	0.0	0.0	0.0	0	0.079

If you want to remove a bid within the current round just click on “remove” for the package you wish to

eliminate. (*E points to this.*) Try this now – make a bid and then remove it.

Note there can be a great deal of variation in the stand alone value of items – it's not unusual to get a value for one of your items of say 110 and 45 for another item. However, it's the price of an item in relationship to its value, and the other items' you are eligible to bid on, which ultimately determines which packages are most valuable in terms of their profitability. So, for example, if the price of the item with value 110 is 90 and the price of the item with value 45 is 5, the item with value 45 is more profitable (40 vs 20) and the package containing *both* items is even more profitable (60). As we have noted, the Current Profit sort will help you to identify which items and packages are most valuable in terms of your earnings from the auction.

OK we are going to re-start the clock now to let you bid for this round and then go on to see what happens in the next round. Please make your bids.

Experiment: 0044		Design: Combinatorial Clock		Valuation: Capacities		Date Started:						
Period	Round	Experiment Status		Round Duration	Round Time Remaining	Experiment Starting (\$)	Current Balance (\$)	Profit / Loss (\$)				
1	2	Ready to start round		25	25	100.0	100.0	0.0				
Current auctioneer offer												
Item:	A	B	C	D	E	F						
Offer quantity:	1	1	1	1	1	1						
Current round price:	10	10	10	10	10	10						
Price increment:	5	5	5	5	5	5						
Currently demanded bids												
Package		Value		Cost		Potential Profit						
0, 0, 0, 0, 0, 0		0.0		0.0		0.0						
This period's valuation												
ItemA	ItemB	ItemC	ItemD	ItemE	ItemF	Preowned Items	Container Capacity	Container Unit Cost				
51.0	100.0	98.0	102.0	69.0	60.0	0	6	70.0				
Analytics		Previous period results										
		Package	Value	Current cost	Current profit	Profit/ value	Last round submitted	Past cost	Past profit	Decrease profit	Empty slots	Fixed cost/ gross value
add	<input checked="" type="checkbox"/>	1, 1, 1, 1, 1, 1	410.0	60.0	350.0	0.854	1	30.0	380.0	30.0	0	0.171
add	<input type="checkbox"/>	0, 1, 1, 1, 1, 1	359.0	50.0	309.0	0.861	none	0.0	0.0	-309.0	1	0.195
add	<input type="checkbox"/>	1, 1, 1, 1, 1, 0	350.0	50.0	300.0	0.857	none	0.0	0.0	-300.0	1	0.200
add	<input type="checkbox"/>	1, 1, 1, 1, 0, 1	341.0	50.0	291.0	0.853	none	0.0	0.0	-291.0	1	0.205
add	<input type="checkbox"/>	1, 1, 0, 1, 1, 1	312.0	50.0	262.0	0.840	none	0.0	0.0	-262.0	1	0.224
add	<input type="checkbox"/>	1, 0, 1, 1, 1, 1	310.0	50.0	260.0	0.839	none	0.0	0.0	-260.0	1	0.226
add	<input type="checkbox"/>	0, 1, 1, 1, 1, 0	299.0	40.0	259.0	0.866	none	0.0	0.0	-259.0	2	0.234
add	<input type="checkbox"/>	1, 1, 1, 0, 1, 1	308.0	50.0	258.0	0.838	none	0.0	0.0	-258.0	1	0.227
add	<input type="checkbox"/>	0, 1, 1, 1, 0, 1	290.0	40.0	250.0	0.862	none	0.0	0.0	-250.0	2	0.241
add	<input type="checkbox"/>	1, 1, 1, 1, 0, 0	281.0	40.0	241.0	0.858	none	0.0	0.0	-241.0	2	0.249
add	<input type="checkbox"/>	0, 1, 0, 1, 1, 1	261.0	40.0	221.0	0.847	none	0.0	0.0	-221.0	2	0.268
add	<input type="checkbox"/>	0, 0, 1, 1, 1, 1	259.0	40.0	219.0	0.846	none	0.0	0.0	-219.0	2	0.270
add	<input type="checkbox"/>	0, 1, 1, 0, 1, 1	257.0	40.0	217.0	0.844	none	0.0	0.0	-217.0	2	0.272
add	<input type="checkbox"/>	1, 1, 0, 1, 1, 0	252.0	40.0	212.0	0.841	none	0.0	0.0	-212.0	2	0.278
add	<input type="checkbox"/>	1, 0, 1, 1, 1, 0	250.0	40.0	210.0	0.840	none	0.0	0.0	-210.0	2	0.280
add	<input type="checkbox"/>	1, 1, 1, 0, 1, 0	248.0	40.0	208.0	0.839	none	0.0	0.0	-208.0	2	0.282
add	<input type="checkbox"/>	1, 1, 0, 1, 0, 1	243.0	40.0	203.0	0.835	none	0.0	0.0	-203.0	2	0.288
add	<input type="checkbox"/>	1, 0, 1, 1, 0, 1	241.0	40.0	201.0	0.834	none	0.0	0.0	-201.0	2	0.290
add	<input type="checkbox"/>	0, 1, 1, 1, 0, 0	230.0	30.0	200.0	0.870	none	0.0	0.0	-200.0	3	0.304
add	<input type="checkbox"/>	1, 1, 1, 0, 0, 1	239.0	40.0	199.0	0.833	none	0.0	0.0	-199.0	2	0.293
add	<input type="checkbox"/>	1, 0, 0, 1, 1, 1	212.0	40.0	172.0	0.811	none	0.0	0.0	-172.0	2	0.330

This slide shows what you might see after round 1. (Again we have paused the clock so you can see what this slide would look like on your computer screens.)

We are in round 2. The current round prices for each item are shown just below the offer quantity in each case along with the price increment for each item. This bidder, who has positive value for all 6 items, bid on a single package, the one containing all items. (*E points to this*) Note, this package is highlighted in pink. The pink highlighting indicates that if the auction were to end now, this bidder would get this package at the previous rounds prices and earn the profit shown under the column past profit. (*E points to this.*) Let's call such a package a "provisional winner."

Information regarding holding a provisional winner in any given round is provided so you can keep track of your current position in the auction. Holding a provisional winner in any given round is no guarantee you will get that package when the auction ends. If you are holding a provisional winner at the end of a round there are two possibilities with respect to the prices heading into the next round: (1) Prices might have increased for one or more of the items in the package. This is very likely especially in early auction rounds or (2) Prices of none of the items in your package have increased.

If prices have increased and you bid again on this package you are accepting to buy the package at the new higher price. You do not necessarily want to do this, especially later on in the auction, since if there are no price increases in the next two rounds (no new bids) you would get the package at the old, lower prices. That's how this auction works – so by bidding again on a provisionally winning bid you *may be* competing with yourself particularly in later rounds of the auction.

Note that *not* bidding again on a provisional winner does not foreclose getting that package even if as a result of other bidders' actions you are no longer the provisional winner in the next round. You can always come back and bid on the package in question in the round after that.

If you are a provisional winner on a given package in any given round (say round 10) and after bidding in round 11 that package is no longer highlighted in pink on your screen, you would more than likely need to bid on that package again to regain your position as a provisional winner for *that* package. And in terms of determining what you want to bid on in any given round, the sort options, particularly the Current profit sort, is helpful in determining what's best to bid on.

When you are *not* a provisional winner, what you will see is a highlighting just like the above only it will be in yellow, or there will no highlighting at all. If you are *not* a provisional winner if the auction were to end with no new bids you would earn nothing for this auction. (The distinction between yellow and no highlighting is that no highlighting indicates that you did not bid in the previous round. But this is an irrelevant distinction for you since in both cases you are not a provisional winner so if the auction were to end with no new bids, you would earn nothing for this auction round.)

If you are not holding a provisionally winning bid it *definitely pays* to bid in the next round if there are packages that yield positive Current Profits since if the auction were to end now you would earn nothing and pass up on potentially profitable bids.

Special features of the CCA:

One of the special features of the CCA is that all bids in previous rounds are active at their previous round's prices. Since package bidding is "lumpy" (you are not bidding on individual items but rather bundles of items) the combination that maximizes the auctioneer's revenue may require calling on earlier bids. This screen shot provides an example of such a case.

Experiment: 0044		Design: Combinatorial Clock		Valuation: Capacities		Date Started:					
Period	Round	Experiment Status		Round Duration	Round Time Remaining	Experiment Starting (\$)	Current Balance (\$)	Profit / Loss (\$)			
1	3	Ready to start round		25	25	100.0	100.0	0.0			
Current auctioneer offer											
Item:	A	B	C	D	E	F					
Offer quantity:	1	1	1	1	1	1					
Current round price:	10	15	15	15	15	15					
Price increment:	0	5	5	5	5	5					
Currently demanded bids											
Package		Value	Cost	Potential Profit							
0, 0, 0, 0, 0, 0		0.0	0.0	0.0							
This period's valuation											
ItemA	ItemB	ItemC	ItemD	ItemE	ItemF	Preowned Items	Container Capacity	Container Unit Cost			
87.0	74.0	77.0	0.0	0.0	0.0	0	3	11.0			
Analytics											
Previous period results											
Package	Value	Current cost	Current profit	Profit/ value	Last round submitted	Past cost	Past profit	Decrease profit	Empty slots	Fixed cost/ gross value	
add	<input checked="" type="checkbox"/> 1, 0, 0, 0, 0, 0	76.0	10.0	66.0	0.868	1	5.0	71.0	5.0	2	0.145
add	<input checked="" type="checkbox"/> 1, 1, 1, 0, 0, 0	227.0	40.0	187.0	0.824	1	15.0	212.0	25.0	0	0.048
add	<input checked="" type="checkbox"/> 1, 0, 1, 0, 0, 0	153.0	25.0	128.0	0.837	none	0.0	0.0	-128.0	1	0.072
add	<input checked="" type="checkbox"/> 1, 1, 0, 0, 0, 0	150.0	25.0	125.0	0.833	none	0.0	0.0	-125.0	1	0.073
add	<input checked="" type="checkbox"/> 0, 1, 1, 0, 0, 0	140.0	30.0	110.0	0.786	2	20.0	120.0	10.0	1	0.079
add	<input checked="" type="checkbox"/> 0, 0, 1, 0, 0, 0	66.0	15.0	51.0	0.773	none	0.0	0.0	-51.0	2	0.167
add	<input checked="" type="checkbox"/> 0, 1, 0, 0, 0, 0	63.0	15.0	48.0	0.762	none	0.0	0.0	-48.0	2	0.175
add	<input type="checkbox"/> 1, 1, 1, 1, 0, 0	216.0	55.0	161.0	0.745	none	0.0	0.0	-161.0	2	0.102
add	<input type="checkbox"/> 1, 1, 1, 0, 1, 0	216.0	55.0	161.0	0.745	none	0.0	0.0	-161.0	2	0.102
add	<input type="checkbox"/> 1, 1, 1, 0, 0, 1	216.0	55.0	161.0	0.745	none	0.0	0.0	-161.0	2	0.102
add	<input type="checkbox"/> 1, 1, 1, 1, 1, 0	216.0	70.0	146.0	0.676	none	0.0	0.0	-146.0	1	0.102
add	<input type="checkbox"/> 1, 1, 1, 1, 0, 1	216.0	70.0	146.0	0.676	none	0.0	0.0	-146.0	1	0.102
add	<input type="checkbox"/> 1, 1, 1, 0, 1, 1	216.0	70.0	146.0	0.676	none	0.0	0.0	-146.0	1	0.102
add	<input type="checkbox"/> 1, 1, 1, 1, 1, 1	216.0	85.0	131.0	0.606	none	0.0	0.0	-131.0	0	0.102
add	<input type="checkbox"/> 1, 0, 1, 1, 0, 0	153.0	40.0	113.0	0.739	none	0.0	0.0	-113.0	0	0.072
add	<input type="checkbox"/> 1, 0, 1, 0, 1, 0	153.0	40.0	113.0	0.739	none	0.0	0.0	-113.0	0	0.072
add	<input type="checkbox"/> 1, 0, 1, 0, 0, 1	153.0	40.0	113.0	0.739	none	0.0	0.0	-113.0	0	0.072
add	<input type="checkbox"/> 1, 1, 0, 1, 0, 0	150.0	40.0	110.0	0.733	none	0.0	0.0	-110.0	0	0.073
add	<input type="checkbox"/> 1, 1, 0, 0, 1, 0	150.0	40.0	110.0	0.733	none	0.0	0.0	-110.0	0	0.073
add	<input type="checkbox"/> 1, 1, 0, 0, 0, 1	150.0	40.0	110.0	0.733	none	0.0	0.0	-110.0	0	0.073
add	<input type="checkbox"/> 0, 1, 1, 1, 0, 0	140.0	45.0	95.0	0.679	none	0.0	0.0	-95.0	0	0.079

Note, round 2 just ended and we are in round 3 of the auction. A bid from round 1 is highlighted in pink, a bid for item A with a value of 76 and a **round 1 cost** of 5 (see Past cost). If this item was purchased at current prices the cost would be 10 (see Current cost). (*E points to these elements as saying them.*) However, since this provisionally winning bid is based on Round 1 prices, if the auction were to end now, this bidder would get this package at the Round 1 price and their earnings would be 71 (see Past profits). (*E points to this.*) In all cases,

earnings on provisionally winning bids (packages highlighted in pink) are given under the column Past profit.

If you are a provisional winner of a package such as this, but have not bid on that package lately, you may *not* want to bid on this same package again as more than likely the price of one or more items in the package has increased (as in the present case) but you have a shot at getting the package at the old prices. However, it's possible, as in this example that there are other, more profitable, packages to bid on (in this case, starting with the package ABC; *E points to this*). Bidding on a more profitable package when you are a provisional winner may or may not replace your provisionally winning bid. If it does replace it, you are a provisional winner on a package with higher profit. If it does not replace it and you remain a provisional winner on the previous round's package, the price increase has no impact on your earnings (since provisional winners from an earlier round always pay the price in effect in the earlier round). Of course, once there are new bids you may be outbid and no longer be a provisional winner.

Price increases between rounds are determined as follows: Take the set of provisionally winning bids in the previous round and the set of new bids in the current round. If between these two sets of bids, there are two or more bids whose packages include the same item, the price for that item will increase in the next round.

The following figure illustrates this. The first row shows provisional winners heading into round 5. The 3-Item ABC bidder is a provisional winner for item A from round 1 and the 6-Item bidder is a provisional winner on the remaining items (as a result of their bid in round 4). As such if the auction were to end now the 3-Item ABC bidder would get item A at the round 1 price and the 6-Item bidder would get the remaining items at round 4 prices.

In round 5 the 3-Item ABC bidder puts in a bid for the package ABC, the 3-Item DEF bidder bids on item D, and the 6-item bidder does not make a new bid. Prices of items A, B, C, and D will all increase in round 6 since between the provisionally winning bids and the new bids there are two or more bids whose packages include these items.

Price Increases between Rds. 5 & 6

	3-Item ABC	3-Item DEF	6-Item
Provisionally Winning	<div style="border: 1px solid black; width: 30px; height: 30px; margin: 0 auto; display: flex; align-items: center; justify-content: center;">A</div> From Rd. 1		<div style="display: flex; justify-content: space-around; margin-bottom: 5px;"> <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">B</div> <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">C</div> <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">D</div> </div> <div style="display: flex; justify-content: space-around; margin-bottom: 5px;"> <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">E</div> <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">F</div> </div> From Rd. 4
Current Packages Demanded in Round 5	<div style="display: flex; justify-content: space-around; margin-bottom: 5px;"> <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">A</div> <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">B</div> <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">C</div> </div> <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">D</div>	<div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">D</div>	
Sum	<div style="display: flex; justify-content: space-around; margin-bottom: 5px;"> <div style="background-color: #cccccc; border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">A</div> <div style="background-color: #cccccc; border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">A</div> <div style="background-color: #cccccc; border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">B</div> </div> <div style="background-color: #cccccc; border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">C</div>	<div style="background-color: #cccccc; border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;">D</div>	<div style="display: flex; justify-content: space-around; margin-bottom: 5px;"> <div style="background-color: #cccccc; border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">B</div> <div style="background-color: #cccccc; border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">C</div> <div style="background-color: #cccccc; border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">D</div> </div> <div style="display: flex; justify-content: space-around; margin-bottom: 5px;"> <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">E</div> <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">F</div> </div>

The prices of A, B, C, and D all increase in Round 6 as there are 2 units of each demanded.
Prices of E and F do not increase as there is only 1 unit of each demanded.

The rule for determining price increases tends to result in steady price increases for individual items.

The auction ends after two rounds of no new bids or what amounts to the same thing, no price increases for 2 consecutive rounds. We use two rounds to give everyone a chance to reconsider their options; i.e., to determine if they are satisfied, given current prices, on their provisional allocations.

You will no doubt see what appear to be some strange things going on in these package auctions. The principle underlying the CCA auction is that the computer is putting packages together so as to maximize the seller's revenue. The situation is very similar to a community storage locker that three people are planning to share: The packages people are bidding on are analogous to different box sizes containing the items individual bidders want to store in the locker. These boxes come in a number of different sizes and there is limited space in the locker, *so there is a fitting problem*. As a result, even though there are boxes containing valuable items (packages with positive profits for you), they may not get into the locker as there is no space for that package

given the *more* valuable packages already on the storage locker. That is, your bid might not become a provisional winner even if you are willing to pay the current prices for some package of items, simply because your package does not fit well with the other provisionally winning bids. Sometimes, you may even be dislodged as a provisional winner even though there have been no price increases for the items you were bidding on because someone else has bid on a package that fits better with others' bids to maximize seller revenue.

Finally, as already noted, sometimes you may get to be a provisional winner on an individual item or a small package that you had bid on earlier in the auction (at those early prices) as they may just help provide the best "fit" for maximizing seller revenue. Thus, in terms of the storage-locker metaphor, bidding on more combinations of packages, especially early on, is similar to preparing a number of different size boxes with the hope that at least one of them will have a chance to get into the locker. At the same time, it's not up to you to decide which boxes get to be stored, but rather the auctioneer who is trying to maximize seller revenue, and using your bids to determine this.

In short, determining provisional winners in this auction is a reasonably complicated process. But the key advantage to package bidding is that it fully accounts for the fixed costs of transporting your items to the locker for storage.

What exactly should you do? If we knew the answer to that we would not have to run the experiment.

OK – I'm going to start the clock and you will continue to bid in rounds until the auction is completed. We will start out with each auction round lasting for 30 seconds. After round 6 or 7 we will reduce the round time to 25 seconds. After round 12 or so we will reduce it to 20 seconds. This should speed up things considerably. Since round time remaining is based on a 30 second round, once these shorter round times go into effect we will tell you and also announce round ending a couple of seconds before the round actually ends.

If you have any questions – raise your hand and one of us will be around to answer your question. This is still a dry run to get you used to the software and auction rules. Don't be bashful. If you have a question I can almost guarantee that someone else has a similar question and it's important to us that everyone understands what's going on.

Remember – since there is more than one group bidding, your auction may end while the other is still going on and you will not be allowed to move on until all the auctions have been completed.

We'll cover the information feedback on your final screens once everyone has finished. So just hang on if your finish early.

Let every group finish before moving on.

OK – all of the groups have finished.

Since we have several groups running at once – if you finish early (you are not the last group to finish) will look something like this:

Experiment: 0047		Design: Combinatorial Clock		Valuation: Capacities		Date Started:						
Period	Round	Experiment Status		Round Duration	Round Time Remaining	Experiment Starting (\$)	Current Balance (\$)	Profit / Loss (\$)				
1	14	Ready to start round		25	25	100.0	162.0	62.0				
Current auctioneer offer												
Your group is finished, please wait for the other groups to finish												
Currently demanded bids												
Your group is finished, please wait for the other groups to finish												
This period's valuation												
ItemA	ItemB	ItemC	ItemD	ItemE	ItemF	Preowned Items	Container Capacity	Container Unit Cost				
87.0	74.0	77.0	0.0	0.0	0.0	0	3	11.0				
Analytics		Previous period results										
	Package	Value	Current cost	Current profit	Profit/ value	Last round submitted	Past cost	Past profit	Decrease profit	Empty slots	Fixed cost/ gross value	
add	<input checked="" type="checkbox"/>	1, 1, 1, 0, 0, 0	227.0	180.0	47.0	0.207	11	165.0	62.0	15.0	0	0.048
add	<input checked="" type="checkbox"/>	1, 0, 1, 0, 0, 0	153.0	120.0	33.0	0.216	none	0.0	0.0	-33.0	1	0.072
add	<input checked="" type="checkbox"/>	1, 1, 0, 0, 0, 0	150.0	120.0	30.0	0.200	none	0.0	0.0	-30.0	1	0.073
add	<input checked="" type="checkbox"/>	0, 1, 1, 0, 0, 0	140.0	120.0	20.0	0.143	none	0.0	0.0	-20.0	1	0.079
add	<input checked="" type="checkbox"/>	1, 0, 0, 0, 0, 0	76.0	60.0	16.0	0.211	none	0.0	0.0	-16.0	2	0.145
add	<input checked="" type="checkbox"/>	0, 0, 1, 0, 0, 0	66.0	60.0	6.0	0.091	none	0.0	0.0	-6.0	2	0.167
add	<input checked="" type="checkbox"/>	0, 1, 0, 0, 0, 0	63.0	60.0	3.0	0.048	none	0.0	0.0	-3.0	2	0.175
add	<input type="checkbox"/>	1, 1, 1, 1, 0, 0	216.0	220.0	-4.0	-0.019	none	0.0	0.0	4.0	2	0.102
add	<input type="checkbox"/>	1, 1, 1, 0, 1, 0	216.0	220.0	-4.0	-0.019	none	0.0	0.0	4.0	2	0.102
add	<input type="checkbox"/>	1, 1, 1, 0, 0, 1	216.0	220.0	-4.0	-0.019	none	0.0	0.0	4.0	2	0.102
add	<input type="checkbox"/>	1, 0, 1, 1, 0, 0	153.0	160.0	-7.0	-0.046	none	0.0	0.0	7.0	0	0.072
add	<input type="checkbox"/>	1, 0, 1, 0, 1, 0	153.0	160.0	-7.0	-0.046	none	0.0	0.0	7.0	0	0.072
add	<input type="checkbox"/>	1, 0, 1, 0, 0, 1	153.0	160.0	-7.0	-0.046	none	0.0	0.0	7.0	0	0.072
add	<input type="checkbox"/>	1, 1, 0, 1, 0, 0	150.0	160.0	-10.0	-0.067	none	0.0	0.0	10.0	0	0.073
add	<input type="checkbox"/>	1, 1, 0, 0, 1, 0	150.0	160.0	-10.0	-0.067	none	0.0	0.0	10.0	0	0.073
add	<input type="checkbox"/>	1, 1, 0, 0, 0, 1	150.0	160.0	-10.0	-0.067	none	0.0	0.0	10.0	0	0.073
add	<input type="checkbox"/>	0, 1, 1, 1, 0, 0	140.0	160.0	-20.0	-0.143	none	0.0	0.0	20.0	0	0.079
add	<input type="checkbox"/>	0, 1, 1, 0, 1, 0	140.0	160.0	-20.0	-0.143	none	0.0	0.0	20.0	0	0.079
add	<input type="checkbox"/>	0, 1, 1, 0, 0, 1	140.0	160.0	-20.0	-0.143	none	0.0	0.0	20.0	0	0.079
add	<input type="checkbox"/>	1, 0, 0, 1, 0, 0	76.0	100.0	-24.0	-0.316	none	0.0	0.0	24.0	1	0.145
add	<input type="checkbox"/>	1, 0, 0, 0, 1, 0	76.0	100.0	-24.0	-0.316	none	0.0	0.0	24.0	1	0.145
add	<input type="checkbox"/>	1, 0, 0, 0, 0, 1	76.0	100.0	-24.0	-0.316	none	0.0	0.0	24.0	1	0.145
add	<input type="checkbox"/>	0, 0, 1, 1, 0, 0	66.0	100.0	-34.0	-0.515	none	0.0	0.0	34.0	1	0.167

This screen lists all possible bids together with the package of items you earned highlighted in pink (if you did not earn any items nothing will be highlighted). For each package the screen shows its value along with the cost and profit at the end of auction prices; this bidder earned items A, B, C whose total value after shipping costs is 227 (see the Value column), for total profit of 62 (see Past profit as well as the Profit/Loss box in the

upper right hand corner of the screen). (*E points to these.*) By listing all possible bids, you can look to see if you might have missed out on a more profitable package. In this case this is the highest profit this bidder could have earned. We give you a chance to look and play with this screen (the sorts still work) as it might be helpful determining what to do in future auctions. However, keep in mind that there is no guarantee that if you had bid differently you would have won an alternate package at these same prices, but it does give you some idea what might have been more a more favorable/profitable outcome.

If you are in the last group that finished your screen will look like this: This screen shows the winning bids for all bidders in your auction, along with the value of the package each bidder earned, its cost and that bidder's profits. Your outcome is highlighted in pink. (*E points to this.*) Your profit or loss from this auction is automatically displayed in the upper right hand corner of your screens and your cash balance is updated as well. (*E points to these as reads script.*) In this example the 3 item ABC bidder earned items A, B and C for a total profit of 62. One of the other bidders got items D, E and F for a profit of 56, and one bidder got no items (and paid nothing).

Experiment: 0047		Design: Combinatorial Clock		Valuation: Capacities		Date Started:			
Period	Round	Experiment Status	Round Duration	Round Time Remaining	Experiment Starting (\$)	Current Balance (\$)	Profit / Loss (\$)		
1	14	Period ended	25	0	100.0	162.0	62.0		
Current auctioneer offer									
Your group is finished, please wait for the other groups to finish									
Currently demanded bids									
Your group is finished, please wait for the other groups to finish									
This period's valuation									
ItemA	ItemB	ItemC	ItemD	ItemE	ItemF	Preowned Items	Container Capacity	Container Unit Cost	
87.0	74.0	77.0	0.0	0.0	0.0	0	3	11.0	
Analytics	Previous period results								
Previous period winning bids (yours in red)									
	Round submitted	Package				Value	Cost	Profit	
	11	1	1	1	0	0	227.0	165.0	62.0
	13	0	0	0	0	0	0.0	0.0	0.0
	11	0	0	0	1	1	1	105.0	56.0

If you finished early, once the last group finishes you can see this same information for you group by clicking on the space Previous period results on this screen (*E points to this*). And the last group can see the same information as those who finished early by clicking on the Analytics box (*E points to this*).

We'll give you a little while to look at these screens at the end of each auction. You can flip back and forth between them by clicking on Analytics and Previous period results this screen..

OK we are going to have a second dry run. Remember your values are likely to have changed and the subjects assigned to bid in your auction have been determined randomly once again. As before there will be 3 bidders in your auction.

INSTRUCTIONS

This is an experiment in the economics of market decision making. The National Science Foundation has provided funds for conducting this research. The instructions are somewhat more complicated than usual but if you are careful and make good decisions, you should still be able to earn a **CONSIDERABLE AMOUNT OF MONEY**, which will be **PAID TO YOU IN CASH** at the end of the experiment.

In this experiment, we will create a market in which you will act as bidders in a series of auctions. There will be four different items for sale in each auction - items A, B, C, D, E, F – with one unit of each item for sale in each auction. These items will be sold using a simultaneous ascending auction (SAA) procedure to be described shortly.

1. **Value of the items for sale:** Each item up for bid will have a known value to you of purchasing that item. The cost of purchasing each item will be determined by its auction cost less the cost of shipping items for delivery. There will be a fixed cost for shipping items which will be the same regardless of the number of items you purchase.

You will be informed of your values for all items up for auction along with your shipping costs. The following examples illustrate this in terms of what you computer screens will show:

Example 1:

This period's valuation								
ItemA	ItemB	ItemC	ItemD	ItemE	ItemF	Preowned Items	Container Capacity	Container Unit Cost
87.0	74.0	77.0	0.0	0.0	0.0	0	3	11.0

This bidder has values for $A = 87$, $B = 74$, $C = 77$ with zero value for items D, E and F, along with a container cost of 11 for shipping 3 units.

Example 2:

This period's valuation								
ItemA	ItemB	ItemC	ItemD	ItemE	ItemF	Preowned Items	Container Capacity	Container Unit Cost
51.0	100.0	98.0	102.0	69.0	60.0	0	6	70.0

This bidder has positive value for all 6 items along with a container cost of 70 for shipping the 6 units.

Note that your values for different items as well as the cost of shipping those items will change from auction to auction and will rarely, if ever, be the same for different bidders within a given auction.

Properties of the SAA: Items will be sold using a simultaneous ascending auction (SAA) procedure. This works as follows: The auction will proceed in rounds, with each round lasting up to 30 seconds during which you can place a bid. As long as there are two or more bids on the same item (i.e., there is excess demand for that item) the auction will continue, with the prices for items with excess demand increasing.

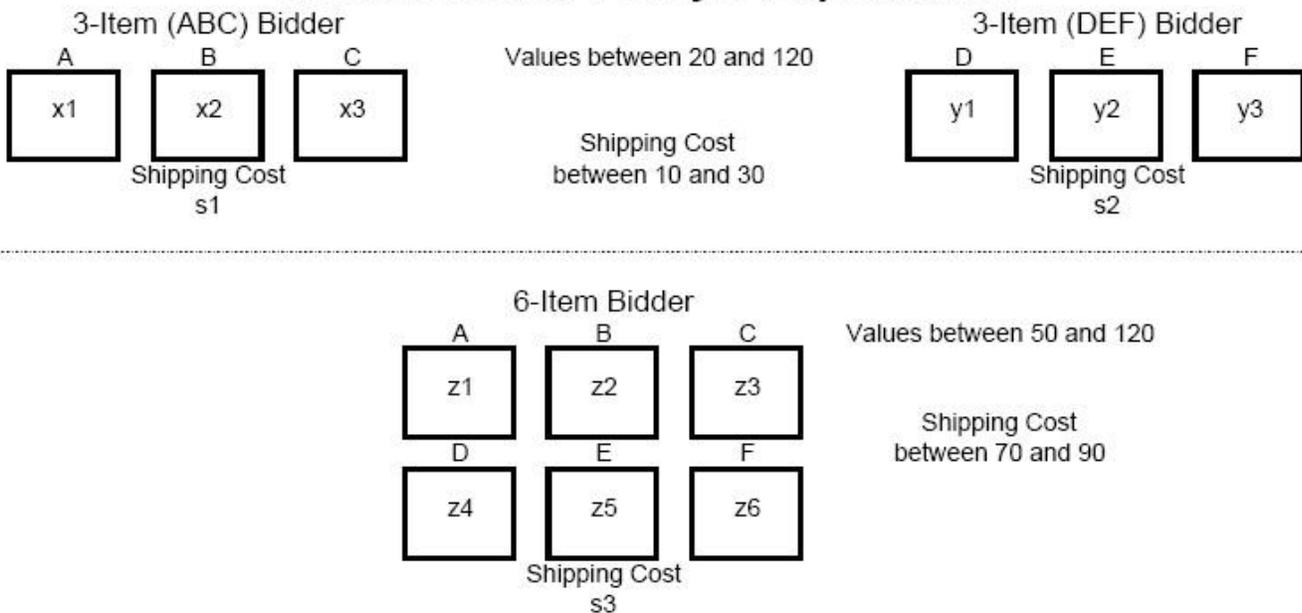
The auction ends once there is no longer any excess demand for any items; that is once total demand is less than or equal to the total supply of each item. At that time each item will be sold to the high bidder for that item at the current price.

Looking back at Example 2 if this bidder was the high bidder for items A, B and C whose prices were 30, 45, and 65 respectively this bidder would earn profits of 33: The stand alone values of A, B and C (248) less the shipping cost of 70 and the item cost of 140.

And if this bidder had earned items A, B, C, D and E whose prices were 30, 45, 65, 80, 40 and 25 respectively, he/she would earn profits of 125: The sum of the stand alone values of A-F (225) less the shipping costs of 70 and the item cost of 285. Note that because of the fixed shipping cost, it is beneficial to buy more items, but it never pays to bid above the stand alone value of any given item.

Most of today will be spent familiarizing you with the auction procedures, including a few practice auctions. For today's experiment and those of the next two sessions there will be 3 bidders in each market. Two of the bidders will have positive values for 3 of the items – one with value for A, B and C and one with value for D, E and F – along with a fixed cost for shipping the items (and zero value for the remaining 3 items). The third bidder will have positive value for all the items, but since 6 items take up more room in the shipping van, he/she will have a higher fixed cost of shipping the items. Item values and shipping costs for bidders will be drawn from the following intervals.

Valuations for Today's Experiment



Item values for the 3-Item bidders will be integer values between 20 and 120 with shipping costs of between 10 and 30. Item values for the 4-Item bidder will be integer values between 50 and 120, with shipping costs of between 70 and 90.

Your role as a 3-Item or 6-Item bidder will change randomly from auction to auction as will the other bidders in your market. Items values will also change from auction to auction along with your shipping costs. Item values and shipping costs are designed to permit us to explore what happens under a number of different valuation profiles while providing you with what we anticipate will provide respectable earnings when *averaged* over all the auctions within a given experimental session.

There are a total of _____ of you in the room so we will be conducting _____ auctions simultaneously, with _____ bidders in each auction. Who will be assigned to bid in your auction will be determined randomly for each auction so it is very unlikely you will be bidding against the same people in any two different auctions. One side effect of this is that we must wait for all the auctions to be completed before moving on to another

auction. So you may be idle for a bit after your auction has finished.

In addition if there are an uneven number of subjects present relative to the number of bidders in each auction market, you may be on standby for a given auction. But you will be guaranteed to be active in the next auction period.

Today's session will consist of a series of dry runs (no cash at stake) so you can play with the software and fully understand it. You will each be given starting capital balances of 150 experimental currency units (ECUs). (All values in the session will be in terms of ECUs). Any profits earned in an auction will be added to your starting capital balances. Any losses will be subtracted from it. Your earnings, if these were the "wet" runs that we will conduct in the next two sessions, would consist of your end of session balance, less 130 ECUs, and would be converted into US Dollars at a minimum rate of $1 \text{ ECU} = 0.10 \text{ US dollars}$.

For today's session you will all be paid a flat fee of \$15.

Dry run instructions:

Login instructions: *Will use their OSU e-mail addresses as their ID number. Will also have to post which exp number working with.*

This is a dry run. Please don't do anything until we ask you to do so, so that we can familiarize you with the information layout.

Experiment: 0053											Design: Simultaneous Ascending		Valuation: Capacities		Date Started:		Home	Sign out
Period	Round	Experiment Status				Round Duration	Round Time Remaining	Experiment Starting (\$)	Current Balance (\$)	Profit / Loss (\$)								
1	1	Ready to start round				30	30	150.0	150.0	0.0								
Current auctioneer offer																		
Item:	A	B	C	D	E	F												
Offer quantity:	1	1	1	1	1	1												
Current round price:	5	5	5	5	5	5												
Price increment:	---	---	---	---	---	---												
Your minimum bid:	0	0	0	0	0	0	Your total eligibility is: 6											
Pay prices:	---	---	---	---	---	---												
Currently demanded bids																		
Package		Value		Cost		Potential Profit												
1, 1, 1, 1, 1, 1		216.0		30.0		186.0												
This period's valuation																		
ItemA	ItemB	ItemC	ItemD	ItemE	ItemF	Preowned Items	Container Capacity	Container Unit Cost										
87.0	74.0	77.0	0.0	0.0	0.0	0	3	11.0										
Analytics																		
Previous period results																		
		Package	Value	Current cost	Current profit	Profit/ value	Last round submitted	Past cost	Past profit	Decrease profit	Empty slots	Fixed cost/ gross value						
set	<input checked="" type="checkbox"/>	1, 1, 1, 0, 0, 0	227.0	15.0	212.0	0.934	none	0.0	0.0	0.0	0	0.048						
set	<input checked="" type="checkbox"/>	1, 1, 1, 1, 1, 1	216.0	30.0	186.0	0.861	none	0.0	0.0	0.0	0	0.102						
set	<input checked="" type="checkbox"/>	1, 0, 1, 0, 0, 0	153.0	10.0	143.0	0.935	none	0.0	0.0	0.0	1	0.072						
set	<input checked="" type="checkbox"/>	1, 1, 0, 0, 0, 0	150.0	10.0	140.0	0.933	none	0.0	0.0	0.0	1	0.073						
set	<input checked="" type="checkbox"/>	0, 1, 1, 0, 0, 0	140.0	10.0	130.0	0.929	none	0.0	0.0	0.0	1	0.079						
set	<input checked="" type="checkbox"/>	1, 0, 0, 0, 0, 0	76.0	5.0	71.0	0.934	none	0.0	0.0	0.0	2	0.145						
set	<input checked="" type="checkbox"/>	0, 0, 1, 0, 0, 0	66.0	5.0	61.0	0.924	none	0.0	0.0	0.0	2	0.167						
set	<input checked="" type="checkbox"/>	0, 1, 0, 0, 0, 0	63.0	5.0	58.0	0.921	none	0.0	0.0	0.0	2	0.175						
set	<input checked="" type="checkbox"/>	0, 0, 0, 0, 0, 0	0.0	0.0	0.0	0.000	none	0.0	0.0	0.0	0	0.000						
set	<input type="checkbox"/>	1, 1, 1, 1, 0, 0	216.0	20.0	196.0	0.907	none	0.0	0.0	0.0	2	0.102						
set	<input type="checkbox"/>	1, 1, 1, 0, 1, 0	216.0	20.0	196.0	0.907	none	0.0	0.0	0.0	2	0.102						
set	<input type="checkbox"/>	1, 1, 1, 0, 0, 1	216.0	20.0	196.0	0.907	none	0.0	0.0	0.0	2	0.102						
set	<input type="checkbox"/>	1, 1, 1, 1, 1, 0	216.0	25.0	191.0	0.884	none	0.0	0.0	0.0	1	0.102						
set	<input type="checkbox"/>	1, 1, 1, 1, 0, 1	216.0	25.0	191.0	0.884	none	0.0	0.0	0.0	1	0.102						
set	<input type="checkbox"/>	1, 1, 1, 0, 1, 1	216.0	25.0	191.0	0.884	none	0.0	0.0	0.0	1	0.102						
set	<input type="checkbox"/>	1, 0, 1, 1, 0, 0	153.0	15.0	138.0	0.902	none	0.0	0.0	0.0	0	0.072						
set	<input type="checkbox"/>	1, 0, 1, 0, 1, 0	153.0	15.0	138.0	0.902	none	0.0	0.0	0.0	0	0.072						

Please look at your screens now. At the upper left hand corner it shows we are in Period 1, Round 1 meaning we are in the first round of the Auction 1 (Period 1). Round duration shows how much time you have to place a bid. Right next to that – Round Time Remaining – shows how much time is left to make your bid. Next to that is your starting capital balance – 150 ECUs in this example – followed by your current balance (your starting

balance plus any profits or losses from previous auctions), followed by the profit or loss from the current auction. The clock is paused right now so we can go through your screens with you.

Right below this are the items for sale – A - F along with the number of units of each item for sale (offer quantity) – which will always be 1 – followed by the current round price and the price increment – the price increase from the last round to the current round. Prices will start at 5 and increase by 5 between all rounds. Right below this is a line specifying “Your minimum bid” (*E points to this*) followed by a line specifying “Pay Prices” (*E points to this too*). Don’t worry about the pay prices for now – we will come back to them later.

Shown to the right is your total eligibility for the current round of bidding. (*E points to this*). Eligibility rules work as follows: In each auction you will start out with eligibility to bid on all 6 items up for sale. However, if in any given round of the auction you bid on fewer than 6 items the maximum number of items you will be eligible to bid will be reduced to the number of items in your new bid. More on this later.

Below this under the heading “Currently Demanded Bid” your screen will show your bid for the current round. At the start of each auction this will be a bid for all 6 items at the current price. (*E points to this*). We start with this bid so that everyone begins with maximum eligibility. We’ll come back to how to bid (and what happens) in a moment.

Below this is the information regarding your value for each item, along with your shipping cost. This example is for the 3-item bidder ABC with values for A = 87, B = 74, C = 77, and D = E = F = 0 and a shipping cost of 11. (*Note – the experimenter will be pointing to these items on the slide as he goes through the example.*)

Below this is the list of *all* possible collections of items this subject could bid on. The list is quite large even for this simple case of six items for sale. To help you make sense of this we have provided a number of possible “sorts” you can conduct. Quite frankly we don’t know how you can bid sensibly without making use of one or more of the sorts, in particular using the “Current profit” sort option (*E points to this*). If you click on this it will sort collections of items based on their profitability at current round prices, with the most profitable collections listed first.

One advantage of sorting based on Current Profit is that you can immediately identify if there are any more profitable collections to bid on by looking at the collection at the top of your list or those immediately below it. Also note that once you have clicked on a particular sort – it will update automatically between rounds – as long as you choose to continue to use that sort option.

We employ a double sort option. Collections with a check mark next to them are sorted first, followed by all others. The check marks are used for the 3-item bidders to distinguish collections that have items with *all* positive value (collections containing A, B or C in this case). For 6 item bidders, any collections bid on will contain a check mark and will be sorted first (as presumably these are of primary interest to the 6 item bidder). Finally, any collections that would yield negative profit at current prices will have the “current profit” entry highlighted in red. This is designed to make it easier to avoid losses.

Unfortunately, 3-Item bidders also start with a check mark next to the collection containing *all* items (its typically the second collection of items to bid on). 3 item bidders probably don’t want to bid on this collection since they have zero value for 3 of the items. This can get confusing so we recommend that you immediately uncheck this collection before the auction starts. You can do this by clicking on the little box next to this collection. Three item bidders, please try this now.

There are a number of other sort options available as well – sorting based on current cost, current value, etc. If you are interested in maximizing your earnings (and we hope that you are) we would recommend focusing on

the Current Profit sort option first and then employing any others you might think helpful. Please play with these sort options a bit a bit to see how they work. Any questions?

Any questions?

How to bid: As noted, each auction begins with the “Currently demanded bid” consisting of all 6 items at current auction prices. This is the default bid at the start of each auction - if you don’t do anything this will be your bid. You can replace the “Currently demanded bid” by clicking on the “set” button next to the collection of items you want to bid on. If this bid involves fewer than 6 items, you will get a warning that your eligibility will be reduced. As such you must click on the Confirm button to actually place your bid. If you don’t click on the Confirm button before the round ends, your new bid will not be entered in place of the Currently demanded bid. *After round 1, the Currently demanded bid will always be your bid from the previous auction round and will serve as your default bid (i.e., if you don’t make a new bid, the “Currently demanded bid” will be your bid for the current round at current round prices.*

Experiment: 0053		Design: Simultaneous Ascending		Valuation: Capacities		Date Started:		
Period	Round	Experiment Status		Round Duration	Round Time Remaining	Experiment Starting (\$)	Current Balance (\$)	Profit / Loss (\$)
1	1	Clock Paused		30	29	150.0	150.0	0.0
Current auctioneer offer								
Item:	A	B	C	D	E	F		
Offer quantity:	1	1	1	1	1	1		
Current round price:	5	5	5	5	5	5		
Price increment:	---	---	---	---	---	---		
Your minimum bid:	0	0	0	0	0	0	Your total eligibility is: 6	
Pay prices:	---	---	---	---	---	---		
Currently demanded bids								
Package		Value		Cost		Potential Profit		
1, 1, 1, 1, 1, 1		216.0		30.0		186.0		
New Bid 1, 1, 1, 0, 0, 0. Eligibility will be reduced to 3 in the next round.								
CONFIRM								
This period's valuation								
ItemA	ItemB	ItemC	ItemD	ItemE	ItemF	Preowned Items	Container Capacity	Container Unit Cost
87.0	74.0	77.0	0.0	0.0	0.0	0	3	11.0

Analytics												
Previous period results												
		Package	Value	Current cost	Current profit	Profit/ value	Last round submitted	Past cost	Past profit	Decrease profit	Empty slots	Fixed cost/ gross value
set	<input checked="" type="checkbox"/>	1, 1, 1, 0, 0, 0	227.0	15.0	212.0	0.934	none	0.0	0.0	0.0	0	0.048
set	<input checked="" type="checkbox"/>	1, 1, 1, 1, 1, 1	216.0	30.0	186.0	0.861	none	0.0	0.0	0.0	0	0.102
set	<input checked="" type="checkbox"/>	1, 0, 1, 0, 0, 0	153.0	10.0	143.0	0.935	none	0.0	0.0	0.0	1	0.072
set	<input checked="" type="checkbox"/>	1, 1, 0, 0, 0, 0	150.0	10.0	140.0	0.933	none	0.0	0.0	0.0	1	0.073
set	<input checked="" type="checkbox"/>	0, 1, 1, 0, 0, 0	140.0	10.0	130.0	0.929	none	0.0	0.0	0.0	1	0.079
set	<input checked="" type="checkbox"/>	1, 0, 0, 0, 0, 0	76.0	5.0	71.0	0.934	none	0.0	0.0	0.0	2	0.145
set	<input checked="" type="checkbox"/>	0, 0, 1, 0, 0, 0	66.0	5.0	61.0	0.924	none	0.0	0.0	0.0	2	0.167
set	<input checked="" type="checkbox"/>	0, 1, 0, 0, 0, 0	63.0	5.0	58.0	0.921	none	0.0	0.0	0.0	2	0.175
set	<input checked="" type="checkbox"/>	0, 0, 0, 0, 0, 0	0.0	0.0	0.0	0.000	none	0.0	0.0	0.0	0	0.000
set	<input type="checkbox"/>	1, 1, 1, 1, 0, 0	216.0	20.0	196.0	0.907	none	0.0	0.0	0.0	2	0.102
set	<input type="checkbox"/>	1, 1, 1, 0, 1, 0	216.0	20.0	196.0	0.907	none	0.0	0.0	0.0	2	0.102
set	<input type="checkbox"/>	1, 1, 1, 0, 0, 1	216.0	20.0	196.0	0.907	none	0.0	0.0	0.0	2	0.102
set	<input type="checkbox"/>	1, 1, 1, 1, 1, 0	216.0	25.0	191.0	0.884	none	0.0	0.0	0.0	1	0.102
set	<input type="checkbox"/>	1, 1, 1, 1, 0, 1	216.0	25.0	191.0	0.884	none	0.0	0.0	0.0	1	0.102
set	<input type="checkbox"/>	1, 1, 1, 0, 1, 1	216.0	25.0	191.0	0.884	none	0.0	0.0	0.0	1	0.102
set	<input type="checkbox"/>	1, 0, 1, 1, 0, 0	153.0	15.0	138.0	0.902	none	0.0	0.0	0.0	0	0.072
set	<input type="checkbox"/>	1, 0, 1, 0, 1, 0	153.0	15.0	138.0	0.902	none	0.0	0.0	0.0	0	0.072

Note, we require you to confirm your bid any time you bid on fewer items than the “Currently demanded bid” because this will reduce the number of items you are eligible to bid on to the number of items in your new bid. And once your eligibility has been reduced, it can’t be increased until the next auction. You can bid on a different set of items, but you can’t bid on more items than the number of items you are eligible to bid on.

In this example the 3-Item A-C bidder chose to bid on all 3 items with positive value (items A-C). Since her eligibility will be reduced with this bid she must click on the CONFIRM button. (*E points to this.*) (Note, in this case the reduced eligibility doesn’t matter much since there are only 3 items with positive value for this bidder.)

You can only bid on 1 collection of items in any given round of the auction. Further, what is reported as potential profit is just that – *potential* profit, as your earnings from any auction will not be realized until the auction is over. Further, and this is quite important, when you bid on a collection of items there is no assurance that you will get that collection of items. You may get all of the items, none of the items, or only *part* of the items you are bidding on. This will become clearer later on as we go through more examples.

To make a bid you click on the “set” button to the left of the collection you want to bid on.

Please make a bid now that reduces your eligibility (a bid on a collection with fewer than 6 items) to see how this process works. Also confirm this bid. (Of course if this was a real auction you would not want to do this if you are happy with the starting round bid – this is strictly up to you to decide when we play for cash. Right now we only want you to see how the software works.)

OK has everyone done this?

Now you can change your bid and restore your eligibility *within a given round, but not between rounds*. So click on “set” next to a collection that restores some eligibility to see how this works. Note that should you then change your mind again within a given round and bid on a collection that reduces your eligibility, you will not see the warning about reduced eligibility again. So try this too.

OK we are going to re-start the clock now – to let you bid for this round and then go on to see what happens in the next round. Please make your bids.

Experiment: 0053		Design: Simultaneous Ascending		Valuation: Capacities		Date Started:			
Period	Round	Experiment Status			Round Duration	Round Time Remaining	Experiment Starting (\$)	Current Balance (\$)	Profit / Loss (\$)
1	2	Ready to start round			30	30	150.0	150.0	0.0

Current auctioneer offer						
Item:	A	B	C	D	E	F
Offer quantity:	1	1	1	1	1	1
Current round price:	5	10	10	10	10	5
Price increment:	0	5	5	5	5	0
Your minimum bid:	0	0	0	0	0	0
Pay prices:	---	---	---	---	---	---

Your total eligibility is: 4

Currently demanded bids			
Package	Value	Cost	Potential Profit
0, 1, 1, 1, 1, 0	299.0	40.0	259.0

This period's valuation								
ItemA	ItemB	ItemC	ItemD	ItemE	ItemF	Preowned Items	Container Capacity	Container Unit Cost
51.0	100.0	98.0	102.0	69.0	60.0	0	6	70.0

Analytics Previous period results

		Package	Value	Current cost	Current profit	Profit/ value	Last round submitted	Past cost	Past profit	Decrease profit	Empty slots	Fixed cost/ gross value
set	<input checked="" type="checkbox"/>	0, 1, 1, 1, 1, 0	299.0	40.0	259.0	0.866	1	20.0	279.0	20.0	2	0.234
set	<input checked="" type="checkbox"/>	0, 0, 0, 0, 0, 0	0.0	0.0	0.0	0.000	none	0.0	0.0	0.0	0	0.000
set	<input type="checkbox"/>	0, 1, 1, 1, 0, 1	290.0	35.0	255.0	0.879	none	0.0	0.0	-255.0	2	0.241
set	<input type="checkbox"/>	1, 1, 1, 1, 0, 0	281.0	35.0	246.0	0.875	none	0.0	0.0	-246.0	2	0.249
set	<input type="checkbox"/>	0, 1, 0, 1, 1, 1	261.0	35.0	226.0	0.866	none	0.0	0.0	-226.0	2	0.268
set	<input type="checkbox"/>	0, 0, 1, 1, 1, 1	259.0	35.0	224.0	0.865	none	0.0	0.0	-224.0	2	0.270
set	<input type="checkbox"/>	0, 1, 1, 0, 1, 1	257.0	35.0	222.0	0.864	none	0.0	0.0	-222.0	2	0.272
set	<input type="checkbox"/>	1, 1, 0, 1, 1, 0	252.0	35.0	217.0	0.861	none	0.0	0.0	-217.0	2	0.278
set	<input type="checkbox"/>	1, 0, 1, 1, 1, 0	250.0	35.0	215.0	0.860	none	0.0	0.0	-215.0	2	0.280
set	<input type="checkbox"/>	1, 1, 0, 1, 0, 1	243.0	30.0	213.0	0.877	none	0.0	0.0	-213.0	2	0.288
set	<input type="checkbox"/>	1, 1, 1, 0, 1, 0	248.0	35.0	213.0	0.859	none	0.0	0.0	-213.0	2	0.282
set	<input type="checkbox"/>	1, 0, 1, 1, 0, 1	241.0	30.0	211.0	0.876	none	0.0	0.0	-211.0	2	0.290
set	<input type="checkbox"/>	1, 1, 1, 0, 0, 1	239.0	30.0	209.0	0.874	none	0.0	0.0	-209.0	2	0.293
set	<input type="checkbox"/>	0, 1, 1, 1, 0, 0	230.0	30.0	200.0	0.870	none	0.0	0.0	-200.0	3	0.304
set	<input type="checkbox"/>	1, 0, 0, 1, 1, 1	212.0	30.0	182.0	0.858	none	0.0	0.0	-182.0	2	0.330
set	<input type="checkbox"/>	1, 1, 0, 0, 1, 1	210.0	30.0	180.0	0.857	none	0.0	0.0	-180.0	2	0.333
set	<input type="checkbox"/>	1, 0, 1, 0, 1, 1	208.0	30.0	178.0	0.856	none	0.0	0.0	-178.0	2	0.337

set	<input type="checkbox"/>	1, 0, 0, 0, 0, 1	41.0	10.0	31.0	0.756	none	0.0	0.0	-31.0	4	1.707
set	<input type="checkbox"/>	0, 0, 0, 1, 0, 0	32.0	10.0	22.0	0.688	none	0.0	0.0	-22.0	5	2.188
set	<input type="checkbox"/>	0, 1, 0, 0, 0, 0	30.0	10.0	20.0	0.667	none	0.0	0.0	-20.0	5	2.333
set	<input type="checkbox"/>	0, 0, 1, 0, 0, 0	28.0	10.0	18.0	0.643	none	0.0	0.0	-18.0	5	2.500
set	<input type="checkbox"/>	0, 0, 0, 0, 1, 0	-1.0	10.0	-11.0	11.000	none	0.0	0.0	11.0	5	-70.000
set	<input type="checkbox"/>	0, 0, 0, 0, 0, 1	-10.0	5.0	-15.0	1.500	none	0.0	0.0	15.0	5	-7.000
set	<input type="checkbox"/>	1, 0, 0, 0, 0, 0	-19.0	5.0	-24.0	1.263	none	0.0	0.0	24.0	5	-3.684
ineligible		1, 1, 1, 1, 1, 1	410.0	50.0	360.0	0.878	none	0.0	0.0	-360.0	0	0.171
ineligible		0, 1, 1, 1, 1, 1	359.0	45.0	314.0	0.875	none	0.0	0.0	-314.0	1	0.195
ineligible		1, 1, 1, 1, 1, 0	350.0	45.0	305.0	0.871	none	0.0	0.0	-305.0	1	0.200
ineligible		1, 1, 1, 1, 0, 1	341.0	40.0	301.0	0.883	none	0.0	0.0	-301.0	1	0.205
ineligible		1, 1, 0, 1, 1, 1	312.0	40.0	272.0	0.872	none	0.0	0.0	-272.0	1	0.224
ineligible		1, 0, 1, 1, 1, 1	310.0	40.0	270.0	0.871	none	0.0	0.0	-270.0	1	0.226
ineligible		1, 1, 1, 0, 1, 1	308.0	40.0	268.0	0.870	none	0.0	0.0	-268.0	1	0.227

OK – this slide shows what you are likely to see after round 1. (Again we have stopped the clock so you can see this slide as well as look at your screens.)

Listed under “Currently demand bid” is her bid from the previous round. In this example the 6 item bidder chose to bid on 4 items so that reduced here her eligibility from 6 to 4. As such she is no longer permitted to bid on 5 or more items. Possible bids containing 5 or more items are automatically dropped to the bottom of her screen and noted as “ineligible to bid on”. (*E points to this.*) (Note, the bids shown in these examples are strictly designed to illustrate how the software works. It probably does not pay to drop you eligibility below the number of items you have positive value for early on when prices of these items are really low as it just means giving up on positive profit opportunities before you have any idea of whether or not you could make a profit on these items. Later on in the auction is another matter as you will see shortly.)

To reiterate, what the reduction in eligibility does is to prevent you from bidding on a more items than you are currently bidding on. Note, you can switch which particular items you bid on in the future, you just can’t bid on more items than you eligibility permits.

We are in round 2. The current round prices for each item are shown just below the offer quantity in each case along with the price increment for each item. (This will always be 5 in today’s experiment.)

Any questions?

Finally, we should note that any bids that would yield negative profit at current prices will have the “current profit” entry highlighted in red. This is designed to make it easier to identify such bids.

Also very important, when you no longer find it profitable to bid – you must click on “set” next to the 0, 0, 0, 0, 0, 0 package in order to stop bidding. Otherwise the program will keep bidding for you based on the previous round’s bid.

Special properties of the SAA:

Minimum bid requirement: The minimum bid requirement will kick in once there is no longer any excess demand for an item and you are the current high bidder for that item. What the minimum bid requirement means is that you are obliged to maintain your bid for that item unless someone else tops your bid for that item. This holds regardless of whether or not you are earning a positive profit on this item or set of items with a minimum bid requirement.

The following screen shots show a case in which the minimum bid requirement kicks in. We walk you through it. In round 3 – shown here – the 3-item ABC bidder placed a bid on A, B and C. There was excess demand for A, B and C heading into round 3 as indicated by the fact that both their prices increased by 5.

Experiment: 0055		Design: Simultaneous Ascending		Valuation: Capacities		Date Started:					
Period	Round	Experiment Status		Round Duration	Round Time Remaining	Experiment Starting (\$)	Current Balance (\$)	Profit / Loss (\$)			
1	3	Clock Paused		30	29	150.0	150.0	0.0			
Current auctioneer offer											
Item:	A	B	C	D	E	F					
Offer quantity:	1	1	1	1	1	1					
Current round price:	15	15	15	15	15	15					
Price increment:	5	5	5	5	5	5					
Your minimum bid:	0	0	0	0	0	0	Your total eligibility is: 3				
Pay prices:	---	---	---	---	---	---					
Currently demanded bids											
Package		Value		Cost		Potential Profit					
1, 1, 1, 0, 0, 0		227.0		45.0		182.0					
This period's valuation											
ItemA	ItemB	ItemC	ItemD	ItemE	ItemF	Preowned Items	Container Capacity	Container Unit Cost			
87.0	74.0	77.0	0.0	0.0	0.0	0	3	11.0			
Analytics		Previous period results									
Package	Value	Current cost	Current profit	Profit/ value	Last round submitted	Past cost	Past profit	Decrease profit	Empty slots	Fixed cost/ gross value	
<input checked="" type="checkbox"/>	1, 1, 1, 0, 0, 0	227.0	45.0	182.0	0.802	2	30.0	197.0	15.0	0	0.048
<input checked="" type="checkbox"/>	1, 0, 1, 0, 0, 0	153.0	30.0	123.0	0.804	none	0.0	0.0	-123.0	1	0.072
<input checked="" type="checkbox"/>	1, 1, 0, 0, 0, 0	150.0	30.0	120.0	0.800	none	0.0	0.0	-120.0	1	0.073
<input checked="" type="checkbox"/>	0, 1, 1, 0, 0, 0	140.0	30.0	110.0	0.786	none	0.0	0.0	-110.0	1	0.079
<input checked="" type="checkbox"/>	1, 0, 0, 0, 0, 0	76.0	15.0	61.0	0.803	none	0.0	0.0	-61.0	2	0.145
<input checked="" type="checkbox"/>	0, 0, 1, 0, 0, 0	66.0	15.0	51.0	0.773	none	0.0	0.0	-51.0	2	0.167
<input checked="" type="checkbox"/>	0, 1, 0, 0, 0, 0	63.0	15.0	48.0	0.762	none	0.0	0.0	-48.0	2	0.175
<input checked="" type="checkbox"/>	0, 0, 0, 0, 0, 0	0.0	0.0	0.0	0.000	none	0.0	0.0	0.0	0	0.000
<input type="checkbox"/>	1, 0, 1, 1, 0, 0	153.0	45.0	108.0	0.706	none	0.0	0.0	-108.0	0	0.072
<input type="checkbox"/>	1, 0, 1, 0, 1, 0	153.0	45.0	108.0	0.706	none	0.0	0.0	-108.0	0	0.072
<input type="checkbox"/>	1, 0, 1, 0, 0, 1	153.0	45.0	108.0	0.706	none	0.0	0.0	-108.0	0	0.072
<input type="checkbox"/>	1, 1, 0, 1, 0, 0	150.0	45.0	105.0	0.700	none	0.0	0.0	-105.0	0	0.073
<input type="checkbox"/>	1, 1, 0, 0, 1, 0	150.0	45.0	105.0	0.700	none	0.0	0.0	-105.0	0	0.073
<input type="checkbox"/>	1, 1, 0, 0, 0, 1	150.0	45.0	105.0	0.700	none	0.0	0.0	-105.0	0	0.073
<input type="checkbox"/>	0, 1, 1, 1, 0, 0	140.0	45.0	95.0	0.679	none	0.0	0.0	-95.0	0	0.079
<input type="checkbox"/>	0, 1, 1, 0, 1, 0	140.0	45.0	95.0	0.679	none	0.0	0.0	-95.0	0	0.079
<input type="checkbox"/>	0, 1, 1, 0, 0, 1	140.0	45.0	95.0	0.679	none	0.0	0.0	-95.0	0	0.079

This next slide shows the situation in round 4 for this bidder. There is no longer excess demand for A as indicated by the fact that the price increment was 0, as the other(s) previously bidding on A did not do so in round 3. Since this bidder submitted a bid for A in Round 3 and there is no longer any excess demand she is obliged to maintain her bid on A in Round 4 at the Round 3 price of 15. You can see that the minimum bid requirement has kicked in because there is a 1 below A in the row for the minimum bid requirement (*E points to this*). Note that any bid that does not contain A is no longer an eligible bid for this 3-Item bidder (for example, bidding on item B alone or bidding on no items at all). (*E points to these*) So not only has her eligibility been reduced to 2 units, she must include A in any subsequent bids until someone else tops her bid for A. Note that the remaining eligible bids all contain item A. Bids not containing A are ineligible until someone else bids on A.

Experiment: 0055		Design: Simultaneous Ascending				Valuation: Capacities		Date Started:				
Period	Round	Experiment Status				Round Duration	Round Time Remaining	Experiment Starting (\$)	Current Balance (\$)	Profit / Loss (\$)		
1	4	Ready to start round				30	30	150.0	150.0	0.0		
Current auctioneer offer												
Item:	A	B	C	D	E	F						
Offer quantity:	1	1	1	1	1	1						
Current round price:	15	20	20	20	20	20						
Price increment:	0	5	5	5	5	5						
Your minimum bid:	1	0	0	0	0	0	Your total eligibility is: 3					
Pay prices:	---	---	---	---	---	---						
Currently demanded bids												
Package		Value		Cost		Potential Profit						
1, 1, 1, 0, 0, 0		227.0		55.0		172.0						
This period's valuation												
ItemA	ItemB	ItemC	ItemD	ItemE	ItemF	Preowned Items	Container Capacity	Container Unit Cost				
87.0	74.0	77.0	0.0	0.0	0.0	0	3	11.0				
Analytics												
Previous period results												
		Package	Value	Current cost	Current profit	Profit/ value	Last round submitted	Past cost	Past profit	Decrease profit	Empty slots	Fixed cost/ gross value
set	<input checked="" type="checkbox"/>	1, 1, 1, 0, 0, 0	227.0	55.0	172.0	0.758	3	45.0	182.0	10.0	0	0.048
set	<input checked="" type="checkbox"/>	1, 0, 1, 0, 0, 0	153.0	35.0	118.0	0.771	none	0.0	0.0	-118.0	1	0.072
set	<input checked="" type="checkbox"/>	1, 1, 0, 0, 0, 0	150.0	35.0	115.0	0.767	none	0.0	0.0	-115.0	1	0.073
set	<input checked="" type="checkbox"/>	1, 0, 0, 0, 0, 0	76.0	15.0	61.0	0.803	none	0.0	0.0	-61.0	2	0.145
set	<input type="checkbox"/>	1, 0, 1, 1, 0, 0	153.0	55.0	98.0	0.641	none	0.0	0.0	-98.0	0	0.072
set	<input type="checkbox"/>	1, 0, 1, 0, 1, 0	153.0	55.0	98.0	0.641	none	0.0	0.0	-98.0	0	0.072
set	<input type="checkbox"/>	1, 0, 1, 0, 0, 1	153.0	55.0	98.0	0.641	none	0.0	0.0	-98.0	0	0.072
set	<input type="checkbox"/>	1, 1, 0, 1, 0, 0	150.0	55.0	95.0	0.633	none	0.0	0.0	-95.0	0	0.073
set	<input type="checkbox"/>	1, 1, 0, 0, 1, 0	150.0	55.0	95.0	0.633	none	0.0	0.0	-95.0	0	0.073
set	<input type="checkbox"/>	1, 1, 0, 0, 0, 1	150.0	55.0	95.0	0.633	none	0.0	0.0	-95.0	0	0.073
set	<input type="checkbox"/>	1, 0, 0, 1, 0, 0	76.0	35.0	41.0	0.539	none	0.0	0.0	-41.0	1	0.145
set	<input type="checkbox"/>	1, 0, 0, 0, 1, 0	76.0	35.0	41.0	0.539	none	0.0	0.0	-41.0	1	0.145
set	<input type="checkbox"/>	1, 0, 0, 0, 0, 1	76.0	35.0	41.0	0.539	none	0.0	0.0	-41.0	1	0.145
set	<input type="checkbox"/>	1, 0, 0, 1, 1, 0	76.0	55.0	21.0	0.276	none	0.0	0.0	-21.0	0	0.145
set	<input type="checkbox"/>	1, 0, 0, 1, 0, 1	76.0	55.0	21.0	0.276	none	0.0	0.0	-21.0	0	0.145
set	<input type="checkbox"/>	1, 0, 0, 0, 1, 1	76.0	55.0	21.0	0.276	none	0.0	0.0	-21.0	0	0.145
ineligible		1, 1, 1, 1, 0, 0	216.0	75.0	141.0	0.653	none	0.0	0.0	-141.0	2	0.102

Price increase rules: Prices will increase for all items for which there is excess demand (2 or more subjects placing a bid on the same item). They will increase by 5 in each round for all items with excess demand. Prices for items with no excess demand remain constant.

The auction ends once there is no longer any excess demand for *all* items.

Rollback rules and Pay prices: There may be times near the end of an auction where going from one round to the next we go from excess demand for one or more items to zero demand for those items as all bidders stop bidding on those items at the same time. When this happens, we will employ the following price rollback procedure to determine who gets that item and at what price:

1. We essentially cancel *all* the bids in the round for which demand for *any* item goes from excess demand to zero demand.
2. The computer randomly assigns the item to one of the bidders who bid on that item in the previous round at the previous round's price (a price they had been willing to pay for it). In exchange for this, the bidder assigned the item will have a minimum bid requirement for that item until someone else decides to bid on it.
3. The auction round that was cancelled then repeats itself with the Pay price applying to the bidder randomly assigned the item. Anyone else wanting that item will have to pay the current round price, which is higher than the Pay price (the price in the round where demand for the item went to 0).
4. The auction then continues in the usual way.

In short, in those (infrequent) cases where the price increases and demand for an item that had excess demand drops to zero, rather than not selling the item, it will be randomly assigned to one of the bidders who had bid on that item at the previous round's price. Further, anyone else wanting the item will have to pay a higher price for it. In turn the bidder assigned the item will have a minimum bid requirement for that item until someone else decides to bid on it. (Note, this price rollback procedure is necessary to keep the auction moving along in a timely manner.)

The next couple of slides illustrate this process. In round 3 (not shown here) the 3-Item ABC bidder placed a bid on A, B and C. There was excess demand for all items in that round so their prices increased to 20 heading into round 4. We pick up the example in round 4 where we assume that the ABC bidder continues to bid on both B and C. Everything looks normal at this point.

Experiment: 0057		Design: Simultaneous Ascending		Valuation: Capacities		Date Started:						
Period	Round	Experiment Status		Round Duration	Round Time Remaining	Experiment Starting (\$)	Current Balance (\$)	Profit / Loss (\$)				
1	4	Clock Paused		30	30	150.0	150.0	0.0				
Current auctioneer offer												
Item:	A	B	C	D	E	F						
Offer quantity:	1	1	1	1	1	1						
Current round price:	20	20	20	20	20	20						
Price increment:	5	5	5	5	5	5						
Your minimum bid:	0	0	0	0	0	0	Your total eligibility is: 3					
Pay prices:	---	---	---	---	---	---						
Currently demanded bids												
Package		Value		Cost		Potential Profit						
0, 1, 1, 0, 0, 0		140.0		40.0		100.0						
This period's valuation												
ItemA	ItemB	ItemC	ItemD	ItemE	ItemF	Preowned Items	Container Capacity	Container Unit Cost				
87.0	74.0	77.0	0.0	0.0	0.0	0	3	11.0				
Analytics												
Previous period results												
		Package	Value	Current cost	Current profit	Profit/ value	Last round submitted	Past cost	Past profit	Decrease profit	Empty slots	Fixed cost/ gross value
set	<input checked="" type="checkbox"/>	1, 1, 1, 0, 0, 0	227.0	60.0	167.0	0.736	3	45.0	182.0	15.0	0	0.048
set	<input checked="" type="checkbox"/>	1, 0, 1, 0, 0, 0	153.0	40.0	113.0	0.739	none	0.0	0.0	-113.0	1	0.072
set	<input checked="" type="checkbox"/>	1, 1, 0, 0, 0, 0	150.0	40.0	110.0	0.733	none	0.0	0.0	-110.0	1	0.073
set	<input checked="" type="checkbox"/>	0, 1, 1, 0, 0, 0	140.0	40.0	100.0	0.714	none	0.0	0.0	-100.0	1	0.079
set	<input checked="" type="checkbox"/>	1, 0, 0, 0, 0, 0	76.0	20.0	56.0	0.737	none	0.0	0.0	-56.0	2	0.145
set	<input checked="" type="checkbox"/>	0, 0, 1, 0, 0, 0	66.0	20.0	46.0	0.697	none	0.0	0.0	-46.0	2	0.167
set	<input checked="" type="checkbox"/>	0, 1, 0, 0, 0, 0	63.0	20.0	43.0	0.683	none	0.0	0.0	-43.0	2	0.175
set	<input checked="" type="checkbox"/>	0, 0, 0, 0, 0, 0	0.0	0.0	0.0	0.000	none	0.0	0.0	0.0	0	0.000
set	<input type="checkbox"/>	1, 0, 1, 1, 0, 0	153.0	60.0	93.0	0.608	none	0.0	0.0	-93.0	0	0.072
set	<input type="checkbox"/>	1, 0, 1, 0, 1, 0	153.0	60.0	93.0	0.608	none	0.0	0.0	-93.0	0	0.072
set	<input type="checkbox"/>	1, 0, 1, 0, 0, 1	153.0	60.0	93.0	0.608	none	0.0	0.0	-93.0	0	0.072
set	<input type="checkbox"/>	1, 1, 0, 1, 0, 0	150.0	60.0	90.0	0.600	none	0.0	0.0	-90.0	0	0.073
set	<input type="checkbox"/>	1, 1, 0, 0, 1, 0	150.0	60.0	90.0	0.600	none	0.0	0.0	-90.0	0	0.073
set	<input type="checkbox"/>	1, 1, 0, 0, 0, 1	150.0	60.0	90.0	0.600	none	0.0	0.0	-90.0	0	0.073
set	<input type="checkbox"/>	0, 1, 1, 1, 0, 0	140.0	60.0	80.0	0.571	none	0.0	0.0	-80.0	0	0.079
set	<input type="checkbox"/>	0, 1, 1, 0, 1, 0	140.0	60.0	80.0	0.571	none	0.0	0.0	-80.0	0	0.079

In Round 4 in this example the ABC bidder and whoever else was bidding on A decided the price was too high and decided not to bid on A. So in Round 4 there is zero demand for A. At this point the price rollback rule kicks in.

Round 5 now *repeats* Round 4’s Current round prices. The computer has assigned item A to 3-item bidder ABC who had bid on A in round 3 at round 3’s price – 15 (see Pay prices) (*E points to this*) and places a minimum bid requirement on A for bidder ABC. Anyone else wanting A must now pay 20 for it. The minimum bid requirement for bidder A stays in effect until someone else bids on A. *You will know you are in a price rollback round because the price increment is 0 for all items.*

Experiment: 0056		Design: Simultaneous Ascending		Valuation: Capacities		Date Started:						
Period	Round	Experiment Status		Round Duration	Round Time Remaining	Experiment Starting (\$)	Current Balance (\$)	Profit / Loss (\$)				
1	5	Ready to start round		30	30	150.0	150.0	0.0				
Current auctioneer offer												
Item:	A	B	C	D	E	F						
Offer quantity:	1	1	1	1	1	1						
Current round price:	20	20	20	20	20	20						
Price increment:	0	0	0	0	0	0						
Your minimum bid:	1	0	0	0	0	0	Your total eligibility is: 3					
Pay prices:	15	---	---	---	---	---						
Currently demanded bids												
Package		Value		Cost		Potential Profit						
1, 1, 1, 0, 0, 0		227.0		55.0		172.0						
This period's valuation												
ItemA	ItemB	ItemC	ItemD	ItemE	ItemF	Preowned Items	Container Capacity	Container Unit Cost				
87.0	74.0	77.0	0.0	0.0	0.0	0	3	11.0				
Analytics												
Previous period results												Fixed cost/ gross value
		Package	Value	Current cost	Current profit	Profit/ value	Last round submitted	Past cost	Past profit	Decrease profit	Empty slots	
set	<input checked="" type="checkbox"/>	1, 1, 1, 0, 0, 0	227.0	55.0	172.0	0.758	3	45.0	182.0	10.0	0	0.048
set	<input checked="" type="checkbox"/>	1, 0, 1, 0, 0, 0	153.0	35.0	118.0	0.771	none	0.0	0.0	-118.0	1	0.072
set	<input checked="" type="checkbox"/>	1, 1, 0, 0, 0, 0	150.0	35.0	115.0	0.767	none	0.0	0.0	-115.0	1	0.073
set	<input checked="" type="checkbox"/>	1, 0, 0, 0, 0, 0	76.0	15.0	61.0	0.803	none	0.0	0.0	-61.0	2	0.145
set	<input type="checkbox"/>	1, 0, 1, 1, 0, 0	153.0	55.0	98.0	0.641	none	0.0	0.0	-98.0	0	0.072
set	<input type="checkbox"/>	1, 0, 1, 0, 1, 0	153.0	55.0	98.0	0.641	none	0.0	0.0	-98.0	0	0.072
set	<input type="checkbox"/>	1, 0, 1, 0, 0, 1	153.0	55.0	98.0	0.641	none	0.0	0.0	-98.0	0	0.072
set	<input type="checkbox"/>	1, 1, 0, 1, 0, 0	150.0	55.0	95.0	0.633	none	0.0	0.0	-95.0	0	0.073
set	<input type="checkbox"/>	1, 1, 0, 0, 1, 0	150.0	55.0	95.0	0.633	none	0.0	0.0	-95.0	0	0.073
set	<input type="checkbox"/>	1, 1, 0, 0, 0, 1	150.0	55.0	95.0	0.633	none	0.0	0.0	-95.0	0	0.073
set	<input type="checkbox"/>	1, 0, 0, 1, 0, 0	76.0	35.0	41.0	0.539	none	0.0	0.0	-41.0	1	0.145
set	<input type="checkbox"/>	1, 0, 0, 0, 1, 0	76.0	35.0	41.0	0.539	none	0.0	0.0	-41.0	1	0.145
set	<input type="checkbox"/>	1, 0, 0, 0, 0, 1	76.0	35.0	41.0	0.539	none	0.0	0.0	-41.0	1	0.145
set	<input type="checkbox"/>	1, 0, 0, 1, 1, 0	76.0	55.0	21.0	0.276	none	0.0	0.0	-21.0	0	0.145
set	<input type="checkbox"/>	1, 0, 0, 1, 0, 1	76.0	55.0	21.0	0.276	none	0.0	0.0	-21.0	0	0.145
set	<input type="checkbox"/>	1, 0, 0, 0, 1, 1	76.0	55.0	21.0	0.276	none	0.0	0.0	-21.0	0	0.145
ineliaible		1, 1, 1, 1, 0, 0	216.0	75.0	141.0	0.653	none	0.0	0.0	-141.0	2	0.102

There is one final important thing to notice about situations in which a price rollback occurs. After the rollback, for each bidder your “Currently demanded bid” will revert to what it was *at the start* of the previous (do-over) round. (In this example the “Currently demanded bid” at the start of Round 4 was a bid for the collection ABC.) As such you need to pay special attention to determine if you still want to maintain that bid at the do-over round prices since the “Currently demanded bid” is the default bid.

The minimum bid requirement and the price rollback rules in conjunction with the fixed shipping cost establishes a tradeoff that you will want to think about. Because of the fixed shipping costs, at least early on in the auction, it will typically be most profitable for you to bid on a collection that has more than one item in it. However, especially later on in the auction, there are potential risks in doing this as you may wind up with only a subset of the items you wanted whose profits, after paying the auction price, do not cover your shipping costs. What should you do? If we knew that we would not have to run the experiment.

OK – I'm going to start the clock and you will continue to bid in rounds until the auction is completed. We will start out with each auction round lasting for 30 seconds. After round 6 or 7 we will reduce the round time to 25 seconds. After round 12 or so we will reduce it to 20 seconds. This should speed up things considerably. Since round time remaining is based on a 30 second round, once these shorter round times go into effect we will tell you and also announce round ending a couple of seconds before the round actually ends.

If you have any questions – raise your hand and one of us will be around to answer your question. This is still a dry run to get you used to the software and auction rules. Don't be bashful. If you have a question I can almost guarantee that someone else has a similar question and it's important to us that everyone understands what's going on.

Remember – since there is more than one group bidding, your auction may end while the other is still going on and you will not be allowed to move on until all the auctions have been completed.

We'll cover the information feedback on your final screens once everyone has finished. So just hang on if your finish early.

Let every group finish before moving on.

OK – all of the groups have finished.

Since we have several groups running at once – if you finish early (you are not the last group to finish) will look something like this:

Experiment: 0056		Design: Simultaneous Ascending		Valuation: Capacities		Date Started:						
Period	Round	Experiment Status		Round Duration	Round Time Remaining	Experiment Starting (\$)	Current Balance (\$)	Profit / Loss (\$)				
1	15	Ready to start round		30	30	150.0	208.0	58.0				
Current auctioneer offer												
Your group is finished, please wait for the other groups to finish												
Currently demanded bids												
Your group is finished, please wait for the other groups to finish												
This period's valuation												
ItemA	ItemB	ItemC	ItemD	ItemE	ItemF	Preowned Items	Container Capacity	Container Unit Cost				
51.0	100.0	98.0	102.0	69.0	60.0	0	6	70.0				
Analytics		Previous period results										
	Package	Value	Current cost	Current profit	Profit/ value	Last round submitted	Past cost	Past profit	Decrease profit	Empty slots	Fixed cost/ gross value	
set	<input checked="" type="checkbox"/>	1, 1, 1, 0, 1, 1	308.0	250.0	58.0	0.188	13	250.0	58.0	0.0	1	0.227
ineligible		1, 1, 1, 1, 1, 1	410.0	310.0	100.0	0.244	12	305.0	105.0	5.0	0	0.171
ineligible		0, 1, 1, 1, 1, 1	359.0	260.0	99.0	0.276	4	100.0	259.0	160.0	1	0.195
ineligible		1, 1, 1, 1, 1, 0	350.0	265.0	85.0	0.243	none	0.0	0.0	-85.0	1	0.200
ineligible		0, 1, 1, 1, 1, 0	299.0	215.0	84.0	0.281	none	0.0	0.0	-84.0	2	0.234
ineligible		1, 1, 1, 1, 0, 1	341.0	265.0	76.0	0.223	none	0.0	0.0	-76.0	1	0.205
ineligible		0, 1, 1, 1, 0, 1	290.0	215.0	75.0	0.259	none	0.0	0.0	-75.0	2	0.241
ineligible		1, 1, 1, 1, 0, 0	281.0	220.0	61.0	0.217	none	0.0	0.0	-61.0	2	0.249
ineligible		0, 1, 1, 1, 0, 0	230.0	170.0	60.0	0.261	none	0.0	0.0	-60.0	3	0.304
ineligible		0, 1, 1, 0, 1, 1	257.0	200.0	57.0	0.222	none	0.0	0.0	-57.0	2	0.272
ineligible		1, 1, 0, 1, 1, 1	312.0	255.0	57.0	0.183	none	0.0	0.0	-57.0	1	0.224
ineligible		0, 1, 0, 1, 1, 1	261.0	205.0	56.0	0.215	none	0.0	0.0	-56.0	2	0.268
ineligible		1, 0, 1, 1, 1, 1	310.0	255.0	55.0	0.177	none	0.0	0.0	-55.0	1	0.226
ineligible		0, 0, 1, 1, 1, 1	259.0	205.0	54.0	0.208	none	0.0	0.0	-54.0	2	0.270
ineligible		1, 1, 1, 0, 1, 0	248.0	205.0	43.0	0.173	none	0.0	0.0	-43.0	2	0.282
ineligible		0, 1, 1, 0, 1, 0	197.0	155.0	42.0	0.213	none	0.0	0.0	-42.0	3	0.355
ineligible		1, 1, 0, 1, 1, 0	252.0	210.0	42.0	0.167	none	0.0	0.0	-42.0	2	0.278
ineligible		0, 1, 0, 1, 1, 0	201.0	160.0	41.0	0.204	none	0.0	0.0	-41.0	3	0.348
ineligible		1, 0, 1, 1, 1, 0	250.0	210.0	40.0	0.160	none	0.0	0.0	-40.0	2	0.280
ineligible		0, 0, 1, 1, 1, 0	199.0	160.0	39.0	0.196	none	0.0	0.0	-39.0	3	0.352

This screen lists all possible bids together with the collection of items you earned highlighted in pink (if you did not earn any items nothing will be highlighted). For each collection of items the screen shows its value along with the cost and profit at the end of auction prices; this bidder earned all the items except D whose total value after shipping costs is 308, at a total auction cost of 250 for a total profit of 58. By listing all possible bids, you can look to see if might have missed out on a more profitable bid. In this case this was the best this bidder could do. We give you a chance to look and play with this screen (the sorts still work) as it might be helpful

determining what to do in future auctions. However, keep in mind that there is no guarantee that if there was more profitable collection that you would have won those items at those prices. But it does give you some idea what might have been more a more favorable/profitable outcome.

If you are in the last group that finished your screen will look like this: This screen shows the winning bids for all bidders in your auction, along with the value of the package each bidder earned, its cost and that bidder's profits. Your outcome is highlighted in pink. (*E points to this.*) Your profit or loss from this auction is automatically displayed in the upper right hand corner of your screens and your cash balance is updated as well. (*E points to these as reads script.*) In this example this 6-Item bidder got all the items except D whose total value after accounting for shipping costs was 308, earning a profit of 58 after paying the auction cost of 250 for the 5 items. One of the 3-item bidders got item D whose value was 102, earning a profit of 42 after paying the auction cost of 60. The other bidder got no items (and paid nothing).

Experiment: 0056		Design: Simultaneous Ascending		Valuation: Capacities		Date Started:		
Period	Round	Experiment Status		Round Duration	Round Time Remaining	Experiment Starting (\$)	Current Balance (\$)	Profit / Loss (\$)
1	22	Experiment ended		30	30	150.0	208.0	58.0
Current auctioneer offer								
Your group is finished, please wait for the other groups to finish								
Currently demanded bids								
Your group is finished, please wait for the other groups to finish								
This period's valuation								
ItemA	ItemB	ItemC	ItemD	ItemE	ItemF	Preowned Items	Container Capacity	Container Unit Cost
51.0	100.0	98.0	102.0	69.0	60.0	0	6	70.0
Analytics		Previous period results						
Previous period winning bids (yours in red)								
Round submitted		Package	Value	Cost	Profit			
---		0, 0, 0, 0, 0, 0	0.0	0.0	0.0			
---		0, 0, 0, 1, 0, 0	102.0	60.0	42.0			
---		1, 1, 1, 0, 1, 1	308.0	250.0	58.0			

If you finished early, once the last group finishes you can see this same information for you group by clicking on the space Previous period results on this screen (*E points to this*). And the last group can see the same information as those who finished early by clicking on the Analytics box (*E points to this*).

We'll give you a little while to look at these screens at the end of each auction. You can flip back and forth between them by clicking on Analytics and Previous period results this screen.

OK we are going to have some more dry runs. Remember your values are likely to have changed and the subjects assigned to bid in your auction have been determined randomly once again. As before there will be 3 bidders in your auction.