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# **Attachment H**

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## ***Pretest Report***

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## 4 Summary

5 A pre-test was conducted on 30 June 2014 to test the auction software, its interface, and the timing of  
6 the experiment. Specifically, the pre-test was meant to:

- 7 1. Discover any bugs that might occur in the experimental software when multiple bidders were  
8 interfacing with it simultaneously. **Result: minor software bugs found and fixed.**
- 9 2. Test how long it took to read experimental instructions and conduct multiple consecutive  
10 rounds of each of the five auction treatments. Each of the five auction treatments were run  
11 during this pre-test session in order to determine how long it took to conduct a first round of  
12 each treatment (the first round of a treatment always takes longer than subsequent rounds, as  
13 subjects need time to digest instructions for a new set of auction rules) and to conduct  
14 subsequent rounds (the second, third, ..., nth round of a treatment take much less time).  
15 **Result: See below for detailed timing results. We use these timing results to develop our**  
16 **estimate of how many rounds it is possible to complete during a 90 minute experiment.**
- 17 3. Test how long it took to complete the experiment – including all rounds – and close the  
18 experiment by distributing payment and excusing participants from the lab. **Result: see below**  
19 **for timing results.**
- 20 4. Average earnings were 45.81 Experimental Currency Units (ECU), with a minimum payment of 9  
21 and a maximum payment of 106. In order to ensure that the average payment is \$25, this  
22 implies a conversion factor of approximately 0.5. That is, one ECU will be worth \$0.50. The high  
23 payment in this case would have been \$53 and the low payment \$4.50. **Result: We have a**  
24 **sense of how to convert the ECU into USD.**

25 The total time for the pre-test was 2 hours and 10 minutes (start time 3p).

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## 27 Detailed timing

28 It took a total of 10 minutes after the scheduled start time to get all subjects seated and ready to begin  
29 the experiment. After subjects arrived and were seated, the “welcome” script and instructions for  
30 Auction treatment 1 (*baseline treatment* – see Attachment D – instructions for details) were read. This  
31 took a total of 8 minutes.

32 A total of 15 rounds of Auction treatment 1 were completed in a total of 23 minutes (average time per  
33 round of 1.53 minutes).

34 After the conclusion of Auction treatment 1, Auction treatment 2 (see Attachment D for details) began  
35 and subjects completed 10 rounds of Auction treatment 2 in a total of 14 minutes (average time per  
36 round of 1.4 minutes). The Lab manager made the decision to do only 10 periods as a precaution so that  
37 time would not run out before we could test all auction mechanisms. Please note that since Auction  
38 treatment 2 is essentially identical to Auction treatment 1 (but with relaxed maximum price rules), the  
39 reading of detailed instructions was not necessary.

40 After the conclusion of Auction treatment 2, Auction treatment 3 instructions were read in 8 minutes  
 41 (see Attachment D for details) and subjects completed 15 rounds of Auction treatment 3 in a total of 21  
 42 minutes (average time per round of 1.4 minutes).

43 After the conclusion of Auction treatment 3, Auction treatment 4 instructions were read in 6 minutes  
 44 (see Attachment D for details) and subjects completed 12 rounds of Auction treatment 4 in a total of 12  
 45 minutes (average time per round of 1 minute).

46 After the conclusion of Auction treatment 4, Auction treatment 5 instructions were read in 2 minutes  
 47 (see Attachment D for details) and subjects completed 12 rounds of Auction treatment 5 in a total of 9  
 48 minutes (average time per round of 0.75 minutes).

49 Payment and subject checkout took a total of 6 minutes.

50 The table below summarizes the timing of the pretest and our estimate of total time necessary to read  
 51 instructions and the number of minutes needed to complete an auction round.

Auction treatment	Time for Instructions (in minutes)	Rounds completed	Time to complete auction rounds (in minutes)	Average time per round (in minutes)
1	8	15	23	1.5
2	0	10	14	1.4
3	8	15	21	1.4
4	6	12	12	1
5	2	12	9	0.75
Average	4.8			1.2

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53 Based on the pretest, we estimate that it takes approximately 10 minutes to seat subjects and prepare  
 54 them for the experiment and 6 minutes to pay and process subjects at the end of the experiment. We  
 55 assume that this timing will remain constant throughout the planned experiment, leaving us with  $90 -$   
 56  $16 = 74$  minutes to read instructions and complete auction rounds.

57 Our intent is not to implement all five treatments in each session. Rather, sessions will consist of three  
 58 treatments. We completed five treatments in the pretest session in order to test each treatment using  
 59 the software specially designed for this project and to discover if any of the five treatments took  
 60 substantially longer than others. We did not find that any of the auction treatments takes substantially  
 61 longer to understand or to complete than others; the pattern of quicker completion of auction rounds  
 62 under each subsequent treatment (1 – 5) reflects a normal pattern of learning.

63 Based on the pretest, it will take approximately 5 minutes to read instructions for each of the three  
 64 treatments that subjects will face in a session. Three treatments X 5 minutes per treatment for reading  
 65 instructions leaves us with  $74 - 15 = 59$  minutes to complete auction rounds.

66 Based on the results of the pretest we can conservatively estimate that it takes 1.5 minutes to complete  
 67 a single auction round. With 59 minutes to complete auctions, this enables us to run 39 auction rounds

68 in a session. If we equally distribute this time over three treatments, we can run 13 auction rounds per  
69 treatment and still remain within the 90 minute time limit that the experiment advertises.

## 70 **Payment**

71 Average earnings were 45.81 Experimental Currency Units (ECU), with a minimum payment of 9 and a  
72 maximum payment of 106. In order to ensure that the average payment is \$25, this implies a  
73 conversion factor of approximately 0.5. That is, one ECU will be worth \$0.50. The high payment in this  
74 case would have been \$53 and the low payment \$4.50. This range might not be representative of the  
75 actual experiment when performed with the expected number of participants, however. With more  
76 competition (more bidders), the results should become less extreme. It is also possible to change the  
77 distribution of opportunity costs or the conversion factor once the experiments begin. That is, after  
78 holding one complete session, we could change the parameters of the experiment in order to deal with  
79 unexpectedly high (or low) payments.

## 80 **Feedback**

81 The lab manager collected feedback from participants.

82 One participant asked whether it would be possible to allow for non-integer bids (e.g. allow for bids of  
83 \$1.53 instead of \$1). This change has been implemented in the software.

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