

## AUCTION INSTRUCTIONS

You have already earned a show-up fee for your time. You've also made some money based on your performance in the first task. Now, you have the opportunity to make even more money in this auction task.

We will show you different polygon symbols, the same ones you've been seeing all along. Each time you see a symbol, you will place a bid for that symbol.

First, you will see the shape:



Then, you will see under it:

222	250	100	310	366	350	← amounts you can bid, in cents
d	f	g	h	i	k	← The letters you press to bid

The optimal strategy that will pay the most money will be explained in detail below. Generally, it boils down to this: **To make the most money, chose the amount that is closest to what you think the symbol is truly worth.** You will perform multiple trials, each time making a bid for the symbol, but only five randomly selected trials will count. Since you don't know which trials count, you should treat every decision as though it is the only one.

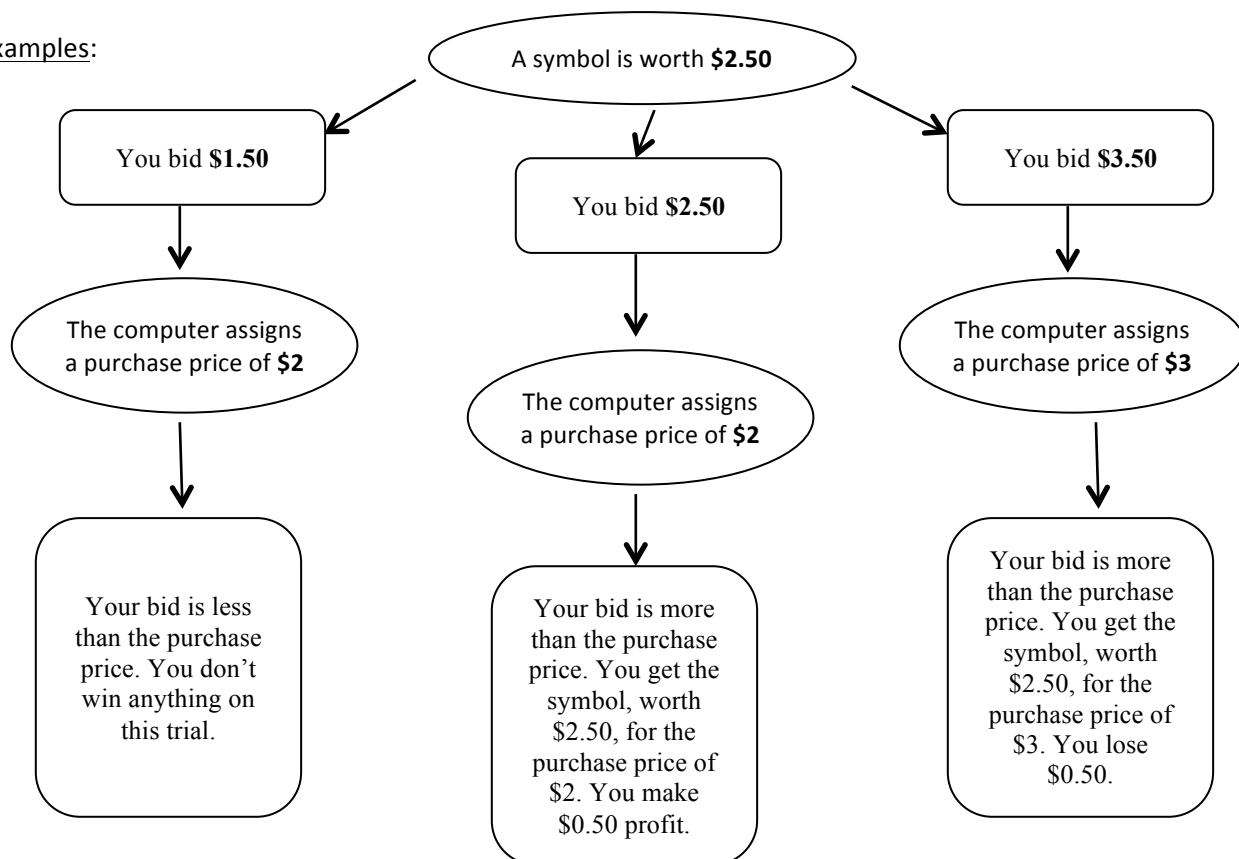
### Definitions:

- **True Value:** The monetary amount that a symbol is actually worth. If you win the symbol, you will be PAID this amount in real money, minus what you paid for the symbol (the purchase price).
- **Purchase Price:** An amount of money, between \$0 and \$4, chosen randomly by the computer after you place your bid. If your bid is greater than or equal to the purchase price, you will get to "buy" that symbol at the purchase price. If your bid is less than the purchase price, you do not get anything.

### Note:

- The symbols are associated with different amounts (their true values).
- You will have \$4 dollars at your disposal on every new trial – so you can bid \$4 max.

### Examples:



Strategy:

**The best thing you can do is to always bid the number that is CLOSEST to your true valuation for a given symbol.** Every trial you should ask yourself how much of the \$4 dollars you want to spend on that particular symbol.

Common mistakes:

You might think that your best strategy is to *bid less than the symbol is worth to you*. This is INCORRECT. Note that the price that you pay is determined randomly by the computer (the purchase price) and NOT by your bid. Thus, by lowering your bid you will not be able to affect the price that you pay, but you might end up losing the opportunity to buy the symbol at a “good” price. This is shown in Example 1 above. There, the bid, at \$1.50 was too low.

You also might think that, since you have \$4 to spend every time, you should *always bid the highest amount* to win the most symbols. This is also INCORRECT. If you do this, you will wind up paying more for some symbols than they are worth, and lose money. This is shown in Example 3 above. There, the bid at \$3.50 was too high.

Also, some people chose to utilize a strategy in which they *bet very similar amounts, regardless of which symbol they are bidding for* (say, e.g. they pick a medium value on each trial for any given symbol) in order to minimize their possible error margin across symbols. This is actually the WORST possible technique, since this will lead to under-bidding on valuable symbols (resulting in not winning the auction on these symbols) and over-bidding on the least valuable symbols (resulting in ‘winning’ the auction for that symbol, but at way too high prizes).

Quiz:

Imagine the true value of a symbol is \$2. Which amount should you bid?

- A) \$1
- B) \$2
- C) \$3

In which one of the following conditions will you get the symbol?

- A) When you bid 2\$ and a purchase price of \$1 is drawn
- B) When you bid 2\$ and a purchase price of \$3 is drawn

Reminder/clarification:

- You will make a bid for “purchasing” a symbol that could be worth more than the values you can bet (>\$4).
- You will bid for purchasing symbols on multiple trials, but only five randomly selected trials will count.
- You should treat each decision as if it were the only one, and independent from all the others.
- Your best strategy is to always bid the number closest to your true value for that symbol.