Welcome to the experiment

This experiment is conducted by a research team at New York University Abu Dhabi. Our objective is to investigate the bidding behavior of participants in competitive situations under conditions of uncertainty regarding the characteristics of their opponents.

Voluntary Participation

Your participation in this experiment is entirely voluntary. If you choose to withdraw, you will forfeit any payment. Please review the information below carefully before deciding whether to participate.

About Your Participation

1. In this experiment, you will take part in various contests, bidding against other participants for monetary rewards. Your performance relative to others will determine your earnings.
2. Your personal information will remain confidential. We may share anonymized data from this study publicly, ensuring that no personal identifiers are included.
3. The experiment is expected to last approximately 15 minutes.
4. You can expect to earn around 5 US dollars. This includes a participation fee of 2 US dollars and a bonus component ranging from 0 to 6 US dollars, depending on your bids and the bids of your opponents.
5. The bonus portion of your payment will be distributed via Prolific within one week after the experiment concludes.
6. To be eligible for any payment, you must pass a comprehension quiz. If you do not pass, you will not receive any payment.
7. There are no known risks associated with this experiment.

If you consent to participate, please click **'I agree'** below.

I agree

I do not agree

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What is your Prolific ID?
Please note that this response should auto-fill with the correct ID.

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About the experiment

In this experiment, you and other participants will compete in a contest to win monetary prizes by submitting costly bids.

Each participant's **final payout** will be:

Endowment - Bidding cost + Prize won.

The endowment, bidding costs, and prizes will be denominated in tokens. You will be paid a bonus of **1 US dollar for every 50 tokens** in your final payout. So, if your final payout is 225 tokens, your bonus payment will be 4.5 US dollars.

We will now describe each of the three components that make up the final payout.

1) Endowment
Each participant's endowment is 200 tokens.

2) Bidding cost
Each participant will be assigned a **cost-per-bid**. This will be either 1 token with a 20% chance, or 2 tokens with an 80% chance.

Participants will not be informed about the cost-per-bid assigned to other participants.

If a participant is assigned a cost-per-bid of 1 token and bids 45, the bidding cost will be 45 tokens.

If a participant is assigned a cost-per-bid of 2 tokens and bids 45, the bidding cost will be 90 tokens.

3) Prize won
Each participant's **prize won** (in tokens) will be determined by their bid and the bid(s) of their opponent(s) in the contest. The exact rules will be explained later.

Participants will now be required to pass a comprehension quiz to continue with the experiment.

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Comprehension Quiz: Attempt #1

There are four questions in this quiz.
You must answer all questions correctly to pass.
You have two attempts to pass the quiz.
If you pass, you will proceed with the experiment.
If you do not pass in two attempts, your participation will be discontinued and no compensation will be provided.

Please answer the following questions carefully.

Suppose you are participating in the following contest:

No. of participants: 2 (including you)
1st prize: 100 tokens
2nd prize: 0 tokens

Rules: Participants will be ranked based on their bids and awarded the corresponding prizes. Ties will be broken uniformly at random.

Reminder:

- You pay a bidding cost equal to *cost-per-bid* × *your bid* tokens, regardless of the prize you win.
- Each participant's cost-per-bid will be either 1 token with a 20% chance, or 2 tokens with an 80% chance.

Suppose your cost-per-bid is 2 tokens.
What is the probability that your opponent has a cost-per-bid of 2 tokens?

0%

20%

80%

100%

Suppose your cost-per-bid is 2 tokens, and you submit a bid of 30.
What will be your bidding cost?

15 tokens

30 tokens

60 tokens

None of the above

Suppose your cost-per-bid is 2 tokens, and you bid 30. Further suppose your opponent bids 45. Recall that the 1st prize is 100 tokens, and the 2nd prize is 0 tokens.
What will be your prize won?

0 tokens

50 tokens

100 tokens

Depends on my opponent's cost-per-bid

Recall that your endowment is 200 tokens and that your final payout is:

endowment - bidding cost + prize won

What will be your final payout (in tokens) in the situation described above?

70 tokens

140 tokens

240 tokens

270 tokens

Please check your answers carefully.
You can also go back to read the instructions again.
If all your answers are correct, you will proceed further in the experiment.

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Attempt #1: Pass

You have answered all questions correctly and passed the comprehension quiz. Please click “Next” to proceed with the experiment.

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Four Contests

Participants will now be asked to submit bids for four different contests. In each contest, you will be competing against 3 other opponents. The contests will differ in the values of the prizes.

Participants will be required to submit bids for each of the four contests under both possible cost-per-bid assignments: 1 token or 2 tokens.

After the experiment, each participant’s final payout will be determined as follows:

1. One of the four contests will be randomly selected.
2. The participant's opponents for that contest will be randomly chosen.
3. The participant and their opponents will each be independently assigned a cost-per-bid, which will be either 1 token with a 20% chance, or 2 tokens with an 80% chance.
4. Given the selected contest (Step 1), the assigned opponents (Step 2), and the cost-per-bid assignments (Step 3), we will use participants’ bids to determine the final payout.

Participants will now see the details of the four contests and will be required to submit their bids for each, under both possible cost-per-bid assignments.

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Contest #1

Here are the details of this contest:

No. of participants: 4 (including you)
1st prize: 50 tokens
2nd prize: 50 tokens
3rd prize: 0 tokens
4th prize: 0 tokens

Rules: Participants will be ranked in order of their bids and awarded the corresponding prizes. Ties will be broken uniformly at random.

Reminder:

- You pay your bidding cost, calculated as *cost-per-bid* × *your bid*, regardless of the prize you receive.
- Each participant's cost-per-bid will be 1 token with a 20% chance, or 2 tokens with an 80% chance.

Please choose your bid for this contest using the slider below.

0 10 20 30 40 50 60 70 80 90 100

Your bid (if your cost-per-bid=1 token)

Your bid (if your cost-per-bid=2 tokens)

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Bid Check

If contest #1 is selected and you are assigned a cost-per-bid of 1 tokens, your final payout will be:

$$200 - 1 \times 59 + \text{Your prize}$$
$$= 141 + \text{Your prize}$$

Your final payout will depend on your opponents' bids, as shown below:

Your rank	Your prize	Your final payout
1	50 tokens	191 tokens
2	50 tokens	191 tokens
3	0 tokens	141 tokens
4	0 tokens	141 tokens

If contest #1 is selected and you are assigned a cost-per-bid of 2 tokens, your final payout will be:

$$200 - 2 \times 35.5 + \text{Your prize}$$
$$= 129 + \text{Your prize}$$

Your final payout will depend on your opponents' bids, as shown below:

Your rank	Your prize	Your final payout
1	50 tokens	179 tokens
2	50 tokens	179 tokens
3	0 tokens	129 tokens
4	0 tokens	129 tokens

If you wish to revise your bids, please click the **Previous** button and choose your bids again.
Otherwise, please click the **Next** button to continue.

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Contest #2

Here are the details of this contest:

No. of participants: 4 (including you)
1st prize: 75 tokens
2nd prize: 25 tokens
3rd prize: 0 tokens
4th prize: 0 tokens

Rules: Participants will be ranked in order of their bids and awarded the corresponding prizes. Ties will be broken uniformly at random.

Reminder:

- You pay your bidding cost, calculated as *cost-per-bid* × *your bid*, regardless of the prize you receive.
- Each participant's cost-per-bid will be 1 token with a 20% chance, or 2 tokens with an 80% chance.

Please choose your bid for this contest using the slider below.

0 10 20 30 40 50 60 70 80 90 100

Your bid (if your cost-per-bid=1 token)

Your bid (if your cost-per-bid=2 tokens)

→

Bid Check

If contest #2 is selected and you are assigned a cost-per-bid of 1 tokens, your final payout will be:

$$200 - 1 \times 50.8 + \text{Your prize}$$
$$= 149.2 + \text{Your prize}$$

Your final payout will depend on your opponents' bids, as shown below:

Your rank	Your prize	Your final payout
1	75 tokens	224.2 tokens
2	25 tokens	174.2 tokens
3	0 tokens	149.2 tokens
4	0 tokens	149.2 tokens

If contest #2 is selected and you are assigned a cost-per-bid of 2 tokens, your final payout will be:

$$200 - 2 \times 30.4 + \text{Your prize}$$
$$= 139.2 + \text{Your prize}$$

Your final payout will depend on your opponents' bids, as shown below:

Your rank	Your prize	Your final payout
1	75 tokens	214.2 tokens
2	25 tokens	164.2 tokens
3	0 tokens	139.2 tokens
4	0 tokens	139.2 tokens

If you wish to revise your bids, please click the **Previous** button and choose your bids again.
Otherwise, please click the **Next** button to continue.

Contest #3

Here are the details of this contest:

No. of participants: 4 (including you)
1st prize: 50 tokens
2nd prize: 25 tokens
3rd prize: 25 tokens
4th prize: 0 tokens

Rules: Participants will be ranked in order of their bids and awarded the corresponding prizes. Ties will be broken uniformly at random.

Reminder:

- You pay your bidding cost, calculated as *cost-per-bid* × *your bid*, regardless of the prize you receive.
- Each participant's cost-per-bid will be 1 token with a 20% chance, or 2 tokens with an 80% chance.

Please choose your bid for this contest using the slider below.

0 10 20 30 40 50 60 70 80 90 100

Your bid (if your cost-per-bid=1 token)

Your bid (if your cost-per-bid=2 tokens)

→

Bid Check

If contest #3 is selected and you are assigned a cost-per-bid of 1 tokens, your final payout will be:

$$200 - 1 \times 37.7 + \text{Your prize}$$
$$= 162.3 + \text{Your prize}$$

Your final payout will depend on your opponents' bids, as shown below:

Your rank	Your prize	Your final payout
1	50 tokens	212.3 tokens
2	25 tokens	187.3 tokens
3	25 tokens	187.3 tokens
4	0 tokens	162.3 tokens

If contest #3 is selected and you are assigned a cost-per-bid of 2 tokens, your final payout will be:

$$200 - 2 \times 25.7 + \text{Your prize}$$
$$= 148.6 + \text{Your prize}$$

Your final payout will depend on your opponents' bids, as shown below:

Your rank	Your prize	Your final payout
1	50 tokens	198.6 tokens
2	25 tokens	173.6 tokens
3	25 tokens	173.6 tokens
4	0 tokens	148.6 tokens

If you wish to revise your bids, please click the **Previous** button and choose your bids again.
Otherwise, please click the **Next** button to continue.

Contest #4

Here are the details of this contest:

No. of participants: 4 (including you)
1st prize: 100 tokens
2nd prize: 0 tokens
3rd prize: 0 tokens
4th prize: 0 tokens

Rules: Participants will be ranked in order of their bids and awarded the corresponding prizes. Ties will be broken uniformly at random.

Reminder:

- You pay your bidding cost, calculated as *cost-per-bid* × *your bid*, regardless of the prize you receive.
- Each participant's cost-per-bid will be 1 token with a 20% chance, or 2 tokens with an 80% chance.

Please choose your bid for this contest using the slider below.

0 10 20 30 40 50 60 70 80 90 100

Your bid (if your cost-per-bid=1 token)

Your bid (if your cost-per-bid=2 tokens)

→

Bid Check

If contest #4 is selected and you are assigned a cost-per-bid of 1 tokens, your final payout will be:

$$200 - 1 \times 51.7 + \text{Your prize}$$
$$= 148.3 + \text{Your prize}$$

Your final payout will depend on your opponents' bids, as shown below:

Your rank	Your prize	Your final payout
1	100 tokens	248.3 tokens
2	0 tokens	148.3 tokens
3	0 tokens	148.3 tokens
4	0 tokens	148.3 tokens

If contest #4 is selected and you are assigned a cost-per-bid of 2 tokens, your final payout will be:

$$200 - 2 \times 36.7 + \text{Your prize}$$
$$= 126.6 + \text{Your prize}$$

Your final payout will depend on your opponents' bids, as shown below:

Your rank	Your prize	Your final payout
1	100 tokens	226.6 tokens
2	0 tokens	126.6 tokens
3	0 tokens	126.6 tokens
4	0 tokens	126.6 tokens

If you wish to revise your bids, please click the **Previous** button and choose your bids again.
Otherwise, please click the **Next** button to continue.

Final Questions

You have completed the main experiment. In this final part, we will ask you some additional questions. Your answers will not affect your payment.

What is your gender?

- Male
- Female
- Other
- Do not wish to disclose

How do you see yourself? Are you generally someone who is fully prepared to take risks, or do you try to avoid taking risks? Please tick a box on the scale below, where 0 means "not at all willing to take risks" and 10 means "fully prepared to take risks."

Not at all willing to take risks										Fully prepared to take risks
0	1	2	3	4	5	6	7	8	9	10

How do you see yourself? Are you generally a person who is competitive, or do you try to avoid competitive environments? Please tick a box on the scale below, where 0 means "not at all competitive" and 10 means "extremely competitive."

Not at all competitve										Extremely competitive
0	1	2	3	4	5	6	7	8	9	10

A pillow and a blanket cost $110 in total. The blanket costs $100 more than the pillow. How much does the pillow cost?

- $5
- $10
- $100
- $105

If it takes 5 machines 5 minutes to make 5 pens, how long would it take 100 machines to make 100 pens?

- 5 minutes
- 100 minutes
- 500 minutes
- None of the above

In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 50 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake?

- 1 day
- 25 days
- 45 days
- 49 days

When choosing how much to bid in the different contests, can you explain your reasoning process?