

1) Study interface – Study 1

Study 1: Intro

Estimating Uncertain Events

In this task, you will read a problem and be asked some related questions. This task is part of a research project on decision making. We are interested in how well you do on the task without the help of external resources. You will be compensated \$1.0 for your participation.

Study 1: training

Practice Question

In this HIT, you will be asked to make a decision on an uncertain event. This short training will show you how to respond to the questions.

Assume you and your friend are equally skilled at a game. If you were to play them at this game 100 times, how often do you think you would win (assuming this game does not have ties)?

About time(s) out of the 100 games

[Continue](#)

Study 1: introduce task

Boulder Sliding

You are an athlete in the up and coming sport of boulder sliding, where the goal is to slide your boulder farther than your competitor's boulder.

You are heading into a championship match against another athlete named Blorg.

In the championship match, you and Blorg each have one chance to slide your respective boulders.

Whoever slides their boulder farther wins **250 Ice Dollars**.

A Decision

Assume that you and Blorg are equally skilled such that if you both use a **standard boulder**, you are both equally likely to win.

You read in the newspaper that there is a **premium boulder** you can rent that is different than the **standard boulder** that Blorg will use. The newspaper reported on a recent study that found that the **premium boulder** slid farther than the **standard boulder** on average in their tests.

It is perfectly within the rules for you to rent this boulder.

However, the rental is good for only one use and it is not free.

You can be certain that Blorg WILL NOT rent a premium boulder.

We're going to ask you how much you would be willing to pay for the **premium boulder**, but before we do you'll see some statistics to aid in your decision.

[Click here to confirm you understand the statistics about you and Blorg.](#)

[Continue](#)

Study 1: show mean difference (percentage difference condition)

Some information about the standard boulder and the premium boulder

Here are information for an athlete like you.

The recent study found in their tests that the **premium boulder** slid 4% farther than the **standard boulder** on average.

Estimation & Decision

Chance of Winning

If you were to compete with Blorg 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, what is your best estimate of the number of times you would win?

Time(s)

Willingness to Pay

Given that **you'll win 250 Ice Dollars if you beat Blorg, but nothing if you lose**, what is the most you would be willing to pay to use the **premium boulder**?

Ice Dollar(s)

Your response indicates that you would be willing to pay up to _____ **Ice Dollar(s)** (but no more) for the **premium boulder**. If you win, you will be ahead _____ **Ice Dollar(s)**, which is the **250** you won minus the _____ that you spent on the boulder. If you lose, you will be out _____ **Ice Dollar(s)**. Click "Continue" below if this is what you want, or update your answer.

Study 1: show mean difference (absolute difference condition)

Some information about the standard boulder and the premium boulder

Here are information for an athlete like you.

The recent study found in their tests that the **premium boulder** slid 4 meters farther than the **standard boulder** on average.

Estimation & Decision

Chance of Winning

If you were to compete with Blorg 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, what is your best estimate of the number of times you would win?

Time(s)

Willingness to Pay

Given that **you'll win 250 Ice Dollars if you beat Blorg, but nothing if you lose**, what is the most you would be willing to pay to use the **premium boulder**?

Ice Dollar(s)

Your response indicates that you would be willing to pay up to _____ **Ice Dollar(s)** (but no more) for the **premium boulder**. If you win, you will be ahead _____ **Ice Dollar(s)**, which is the **250** you won minus the _____ that you spent on the boulder. If you lose, you will be out _____ **Ice Dollar(s)**. Click "Continue" below if this is what you want, or update your answer.

Study 1: show mean difference (directional statement condition)

Some information about the standard boulder and the premium boulder

Again, the recent study found in their tests that the **premium boulder** slid farther than the **standard boulder** that Blorg will use, on average.

Estimation & Decision

Chance of Winning

If you were to compete with Blorg 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, what is your best estimate of the number of times you would win?

Time(s)

Willingness to Pay

Given that **you'll win 250 Ice Dollars if you beat Blorg, but nothing if you lose**, what is the most you would be willing to pay to use the **premium boulder**?

Ice Dollar(s)

Your response indicates that you would be willing to pay up to _____ **Ice Dollar(s)** (but no more) for the **premium boulder**. If you win, you will be ahead _____ **Ice Dollar(s)**, which is the **250** you won minus the _____ that you spent on the boulder. If you lose, you will be out _____ **Ice Dollar(s)**. Click "Continue" below if this is what you want, or update your answer.

[Continue](#)

Study 1: show mean difference (CI without visualization condition)

Some information about the standard boulder and the premium boulder

Here are some statistics, based on estimates for an athlete like you.

- **Your average sliding distance with the standard boulder:** If you were to slide the **standard boulder** 1,000 times, you would attain an **average** distance of **100** meters. A 95% confidence interval on your average sliding distance with a **standard boulder** is **99 to 101** meters.
- **Your average sliding distance with the premium boulder:** If you were to slide the **premium boulder** 1,000 times, you would attain an **average** distance of **104** meters. A 95% confidence interval on your average sliding distance with a **premium boulder** is **103 to 105** meters.

**A 95% confidence interval conveys the uncertainty in estimating your true average sliding distance. It is constructed such that if we watched many such sessions of 1,000 slides and repeated this process, 95% of the constructed intervals would contain your true average.

Estimation & Decision

Chance of Winning

If you were to compete with Blorg 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, what is your best estimate of the number of times you would win?

Time(s)

Willingness to Pay

Given that **you'll win 250 Ice Dollars if you beat Blorg, but nothing if you lose**, what is the most you would be willing to pay to use the **premium boulder**?

Ice Dollar(s)

Your response indicates that you would be willing to pay up to _____ **Ice Dollar(s)** (but no more) for the **premium boulder**. If you win, you will be ahead _____ **Ice Dollar(s)**, which is the **250** you won minus the _____ that you spent on the boulder. If you lose, you will be out _____ **Ice Dollar(s)**. Click "Continue" below if this is what you want, or update your answer.

[Continue](#)

Study 1: show mean difference (CI with visualization condition)

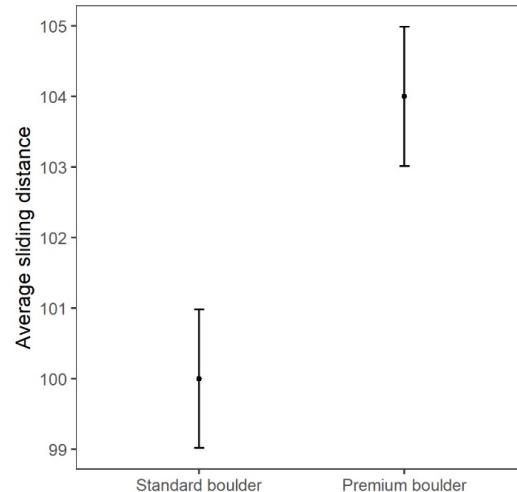
Some information about the standard boulder and the premium boulder

Here are some statistics, based on estimates for an athlete like you.

- **Your average sliding distance with the standard boulder:** If you were to slide the **standard boulder** 1,000 times, you would attain an **average** distance of **100** meters. A 95% confidence interval on your average sliding distance with a **standard boulder** is **99** to **101** meters.
- **Your average sliding distance with the premium boulder:** If you were to slide the **premium boulder** 1,000 times, you would attain an **average** distance of **104** meters. A 95% confidence interval on your average sliding distance with a **premium boulder** is **103** to **105** meters.

**A 95% confidence interval conveys the uncertainty in estimating your true average sliding distance. It is constructed such that if we watched many such sessions of 1,000 slides and repeated this process, 95% of the constructed intervals would contain your true average.

The graph shows your average distance and this interval with the **standard boulder** (left) and the **premium boulder** (right), as indicated by the black points and vertical bars.



Estimation & Decision

Chance of Winning

If you were to compete with Blorg 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, what is your best estimate of the number of times you would win?

Time(s)

Willingness to Pay

Given that you'll win 250 Ice Dollars if you beat Blorg, but nothing if you lose, what is the most you would be willing to pay to use the **premium boulder**?

Ice Dollar(s)

Your response indicates that you would be willing to pay up to _____ **Ice Dollar(s)** (but no more) for the **premium boulder**. If you win, you will be ahead _____ **Ice Dollar(s)**, which is the **250** you won minus the _____ that you spent on the boulder. If you lose, you will be out _____ **Ice Dollar(s)**. Click "Continue" below if this is what you want, or update your answer.

Continue

Study 1: submit page

Thank you!

One last question.

Your response indicates that you would be willing to pay up to **20 Ice Dollars** for the **premium boulder**. Which of the following statements best describes your decision to pay 20 Ice Dollars?

- I was considering the prize money that I would get if I won.
- I was considering the feeling of winning.
- I was considering the prize money that I would get if I won. And I was considering the feeling of winning.
- None of above

Please leave feedback or comments (optional).

You must click the submit button below to turn in your answers and complete the HIT.

[Submit answers back to turk](#)

1) Study interface – Study 2

Study 2: Intro

Estimating Uncertain Events

In this task, you will read a problem and be asked some related questions. This task is part of a research project on decision making. We are interested in how well you do on the task without the help of external resources. You will be compensated \$1.0 for your participation.

Study 2: training

Practice Question

In this HIT, you will be asked to make a decision on an uncertain event. This short training will show you how to respond to the questions.

Assume you and your friend are equally skilled at a game. If you were to play them at this game 100 times, how often do you think you would win (assuming this game does not have ties)?

About time(s) out of the 100 games

[Continue](#)

Study 2: introduce task

Boulder Sliding

You are an athlete in the up and coming sport of boulder sliding, where the goal is to slide your boulder farther than your competitor's boulder.

You are heading into a championship match against another athlete named Blorg.

In the championship match, you and Blorg each have one chance to slide your respective boulders.

Whoever slides their boulder farther wins **250 Ice Dollars**.

A Decision

Assume that you and Blorg are equally skilled such that if you both use a **standard boulder**, you are both equally likely to win.

You read in the newspaper that there is a **premium boulder** you can rent that is different than the **standard boulder** that Blorg will use. The newspaper reported on a recent study that found that the **premium boulder** slid farther than the **standard boulder** on average in their tests.

It is perfectly within the rules for you to rent this boulder.

However, the rental is good for only one use and it is not free.

You can be certain that Blorg WILL NOT rent a premium boulder.

We're going to ask you how much you would be willing to pay for the **premium boulder**, but before we do you'll see some statistics to aid in your decision.

[Click here to confirm you understand the statistics about you and Blorg.](#)

[Continue](#)

Study 2: show mean difference (CI with visualization)

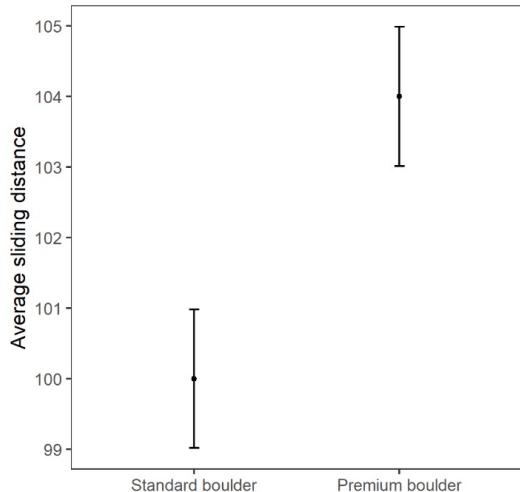
Some information about the standard boulder and the premium boulder

Here are some statistics, based on estimates for an athlete like you.

- **Your average sliding distance with the standard boulder:** If you were to slide the **standard boulder** 1,000 times, you would attain an **average** distance of **100** meters. A 95% confidence interval on your average sliding distance with a **standard boulder** is **99** to **101** meters.
- **Your average sliding distance with the premium boulder:** If you were to slide the **premium boulder** 1,000 times, you would attain an **average** distance of **104** meters. A 95% confidence interval on your average sliding distance with a **premium boulder** is **103** to **105** meters.

**A 95% confidence interval conveys the uncertainty in estimating your true average sliding distance. It is constructed such that if we watched many such sessions of 1,000 slides and repeated this process, 95% of the constructed intervals would contain your true average.

The graph shows your average distance and this interval with the **standard boulder** (left) and the **premium boulder** (right), as indicated by the black points and vertical bars.



Estimation & Decision

Chance of Winning

If you were to compete with Blorg 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, what is your best estimate of the number of times you would win?

Time(s)

Willingness to Pay

Given that you'll win 250 Ice Dollars if you beat Blorg, but nothing if you lose, what is the most you would be willing to pay to use the **premium boulder**?

Ice Dollar(s)

Your response indicates that you would be willing to pay up to _____ **Ice Dollar(s)** (but no more) for the **premium boulder**. If you win, you will be ahead _____ **Ice Dollar(s)**, which is the **250** you won minus the _____ that you spent on the boulder. If you lose, you will be out _____ **Ice Dollar(s)**. Click "Continue" below if this is what you want, or update your answer.

Continue

Study 2: show transition (control condition)

Now, we will give you a chance to revise your estimates of the chance of winning and how much you are willing to pay for the **premium boulder**.

Click here to confirm you understand.

Continue

Study 2: show transition (all other conditions)

Now, we will give you more information about the standard boulder and the **premium boulder** to help you better estimate the chance of winning and decide how much you are willing to pay for the **premium boulder**.

Click here to confirm you understand.

Continue

Study 2: show variability in Individual Outcome (control condition)

A chance to revise your responses

Chance of Winning

If you were to compete with Blorg 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, what is your best estimate of the number of times you would win? (Previously, you said you would win **20 times**)

Time(s)

Willingness to Pay

Given that **you'll win 250 Ice Dollars if you beat Blorg, but nothing if you lose**, what is the most you would be willing to pay to use the **premium boulder**? (Previously, you said you would pay up to **20 Ice Dollars**)

Ice Dollar(s)

Your revised response indicates that you would be willing to pay up to _____ **Ice Dollar(s)** (but no more) for the **premium boulder**. If you win, you will be ahead _____ **Ice Dollar(s)**, which is the **250** you won minus the _____ that you spent on the boulder. If you lose, you will be out _____ **Ice Dollar(s)**. Click "Continue" below if this is what you want, or update your answer.

Study 2: show variability in Individual Outcome (probability of superiority condition)

Additional information to help you estimate and decide

Roughly speaking, if you were to play 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, you would expect to win **57** times.

Click here to confirm you understand.

Continue



Additional information to help you estimate and decide

Roughly speaking, if you were to play 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, you would expect to win **57** times.

A chance to revise your responses

Chance of Winning

Based on the additional information above, if you were to compete with Blorg 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, what is your best estimate of the number of times you would win? (Previously, you said you would win **time**)

Time(s)

Willingness to Pay

Based on the additional information above, given that **you'll win 250 Ice Dollars if you beat Blorg, but nothing if you lose**, what is the most you would be willing to pay to use the **premium boulder**? (Previously, you said you would pay up to **Ice Dollars**)

Ice Dollar(s)

Your revised response indicates that you would be willing to pay up to **Ice Dollar(s)** (but no more) for the **premium boulder**. If you win, you will be ahead **Ice Dollar(s)**, which is the **250** you won minus the **Ice Dollar(s)** that you spent on the boulder. If you lose, you will be out **Ice Dollar(s)**. Click "Continue" below if this is what you want, or update your answer.

Continue

Study 2: show variability in Individual Outcome (height analogy condition)

Additional information to help you estimate and decide

Roughly speaking, the **premium boulder** will beat the **standard boulder** about as often as a randomly selected 16 year old is taller than a randomly selected 15 year old, among American women.

Click here to confirm you understand.

Continue



Additional information to help you estimate and decide

Roughly speaking, the **premium boulder** will beat the **standard boulder** about as often as a randomly selected 16 year old is taller than a randomly selected 15 year old, among American women.

A chance to revise your responses

Chance of Winning

Based on the additional information above, if you were to compete with Blorg 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, what is your best estimate of the number of times you would win? (Previously, you said you would win time)

 Time(s)

Willingness to Pay

Based on the additional information above, given that you'll win 250 Ice Dollars if you beat Blorg, but nothing if you lose, what is the most you would be willing to pay to use the **premium boulder**? (Previously, you said you would pay up to Ice Dollars)

 Ice Dollar(s)

Your revised response indicates that you would be willing to pay up to _____ Ice Dollar(s) (but no more) for the **premium boulder**. If you win, you will be ahead _____ Ice Dollar(s), which is the 250 you won minus the _____ that you spent on the boulder. If you lose, you will be out _____ Ice Dollar(s). Click "Continue" below if this is what you want, or update your answer.

Continue

Study 2: show variability in Individual Outcome (variance condition)

Additional information to help you estimate and decide

Variation in your sliding distances with the standard boulder: Roughly speaking, 95% of your next 1,000 slides would be between **70** and **130** meters, with approximately equal percentages of slides falling short of **70** meters or long of **130** meters.

Variation in your sliding distances with the premium boulder: Roughly speaking, 95% of your next 1,000 slides would be between **74** and **134** meters, with approximately equal percentages of slides falling short of **74** meters or long of **134** meters.

Click here to confirm you understand.

Continue



Additional information to help you estimate and decide

Variation in your sliding distances with the standard boulder: Roughly speaking, 95% of your next 1,000 slides would be between **70** and **130** meters, with approximately equal percentages of slides falling short of **70** meters or long of **130** meters.

Variation in your sliding distances with the premium boulder: Roughly speaking, 95% of your next 1,000 slides would be between **74** and **134** meters, with approximately equal percentages of slides falling short of **74** meters or long of **134** meters.

A chance to revise your responses

Chance of Winning

Based on the additional information above, if you were to compete with Blorg 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, what is your best estimate of the number of times you would win? (Previously, you said you would win **time**)

Time(s)

Willingness to Pay

Based on the additional information above, given that **you'll win 250 Ice Dollars if you beat Blorg, but nothing if you lose**, what is the most you would be willing to pay to use the **premium boulder**? (Previously, you said you would pay up to **Ice Dollars**)

Ice Dollar(s)

Your revised response indicates that you would be willing to pay up to _____ Ice Dollar(s) (but no more) for the **premium boulder**. If you win, you will be ahead _____ Ice Dollar(s), which is the **250** you won minus the _____ that you spent on the boulder. If you lose, you will be out _____ Ice Dollar(s). Click "Continue" below if this is what you want, or update your answer.

Continue

Study 2: show variability in Individual Outcome (weather analogy condition)

Additional information to help you estimate and decide

Roughly speaking, the **premium boulder** will beat the **standard boulder** about as often as the maximum temperature on **February 15th** is higher than the maximum temperature on **January 15th** in New York City.

Click here to confirm you understand.

[Continue](#)



Additional information to help you estimate and decide

Roughly speaking, the **premium boulder** will beat the **standard boulder** about as often as the maximum temperature on **February 15th** is higher than the maximum temperature on **January 15th** in New York City.

A chance to revise your responses

Chance of Winning

Based on the additional information above, if you were to compete with Blorg 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, what is your best estimate of the number of times you would win? (Previously, you said you would win **time**)

 Time(s)

Willingness to Pay

Based on the additional information above, given that **you'll win 250 Ice Dollars if you beat Blorg, but nothing if you lose**, what is the most you would be willing to pay to use the **premium boulder**? (Previously, you said you would pay up to **Ice Dollars**)

 Ice Dollar(s)

Your revised response indicates that you would be willing to pay up to **Ice Dollar(s)** (but no more) for the **premium boulder**. If you win, you will be ahead **Ice Dollar(s)**, which is the **250** you won minus the **Ice Dollar(s)** that you spent on the boulder. If you lose, you will be out **Ice Dollar(s)**. Click "Continue" below if this is what you want, or update your answer.

[Continue](#)

Study 2: show variability in Individual Outcome (category condition)

Additional information to help you estimate and decide

The difference in the average sliding distance between the **standard boulder** and the **premium boulder** is **small** relative to how much individual slides vary around their long-run average.

Click here to confirm you understand.

Continue



Additional information to help you estimate and decide

The difference in the average sliding distance between the **standard boulder** and the **premium boulder** is **small** relative to how much individual slides vary around their long-run average.

A chance to revise your responses

Chance of Winning

Based on the additional information above, if you were to compete with Blorg 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, what is your best estimate of the number of times you would win? (Previously, you said you would win **time**)

 Time(s)

Willingness to Pay

Based on the additional information above, given that **you'll win 250 Ice Dollars if you beat Blorg, but nothing if you lose**, what is the most you would be willing to pay to use the **premium boulder**? (Previously, you said you would pay up to **Ice Dollars**)

 Ice Dollar(s)

Your revised response indicates that you would be willing to pay up to _____ **Ice Dollar(s)** (but no more) for the **premium boulder**. If you win, you will be ahead _____ **Ice Dollar(s)**, which is the **250** you won minus the _____ that you spent on the boulder. If you lose, you will be out _____ **Ice Dollar(s)**. Click "Continue" below if this is what you want, or update your answer.

Continue

Study 2: post-task questions (probability of superiority for standard boulder)

Some estimation: standard boulder

If you were to compete with Blorg 100 times where you had a **standard boulder** and Blorg had a **standard boulder**, what is your best estimate of the number of times you would win?

Time(s)

Continue

Study 2: post-task questions

(probability of superiority for standard boulder – confirm/revise)

Confirmation: Standard Boulder

If you were to compete with Blorg 100 times where you had a **standard boulder** and Blorg had a **standard boulder**, your response indicates that you would win **50 times** and Blorg would win **50 times**. This means that you would win as often as Blorg. Is this what you meant?

Yes No

Then please revise your response: If you were to compete with Blorg 100 times where you had a **standard boulder** and Blorg had a **standard boulder**, what is your best estimate of the number of times you would win?

Time(s)

Continue

Study 2: post-task questions (probability of superiority for height analogy)

Some estimation:height of people

Imagine 100 pairs of American women, each containing a randomly selected 16 year old and a randomly selected 15 year old. In how many of the 100 pairs do you think that the **16 year old** would be taller than the **15 year old**?

Out of the 100 pairs

Continue

Study 2: post-task questions

(probability of superiority for height analogy – confirm/revise)

Confirmation: height of people

Your response indicates that the **16 year old** would be taller than the **15 year old** in **23** out of the 100 pairs, and the **15 year old** would be taller than the **16 year old** in **77** out of the 100 pairs. This means that 15 year old American women are on average taller than 16 year old American women. Is this what you meant?

Yes No

Then please revise your response: Imagine 100 pairs of American women, each containing a randomly selected 16 year old and a randomly selected 15 year old. In how many of the 100 pairs do you think that the **16 year old** would be taller than the **15 year old**?

Year(s) out of the last 100 years

Continue

Study 2: post-task questions (probability of superiority for weather analogy)

Some estimation: NYC weather

In New York City, how many out of the last 100 years do you think that the maximum temperature on **February 15th** was higher than the maximum temperature on **January 15th**?

Year(s) out of the last 100 years

Continue

Study 2: post-task questions

(probability of superiority for weather analogy – confirm/revise)

Confirmation: NYC Weather

Your response indicates that **February 15th** was warmer than **January 15th** for **60 years** out of the last 100 years, and **January 15th** was warmer than **February 15th** for **40 years** out of the last 100 years in New York City. This means that **February** was generally warmer than **January** for the last 100 years. Is this what you meant?

Yes No

Then please revise your response: In New York City, how many out of the last 100 years do you think that the maximum temperature on **February 15th** was higher than the maximum temperature on **January 15th**?

Year(s) out of the last 100 years

Continue

Study 2: submit page

Thank you!

One last question.

Your response indicates that you would be willing to pay up to **20 Ice Dollars** for the **premium boulder**. Which of the following statements best describes your decision to pay 20 Ice Dollars?

- I was considering the prize money that I would get if I won.
- I was considering the feeling of winning.
- I was considering the prize money that I would get if I won. And I was considering the feeling of winning.
- None of above

Please leave feedback or comments (optional).

You must click the submit button below to turn in your answers and complete the HIT.

[Submit answers back to turk](#)

1) Study interface – Study 3

Study 3: Intro

Estimating Uncertain Events

In this task, you will read a problem and be asked some related questions. This task is part of a research project on decision making. We are interested in how well you do on the task without the help of external resources. You will be compensated \$1.0 for your participation.

Study 3: training

Practice Question

In this HIT, you will be asked to make a decision on an uncertain event. This short training will show you how to respond to the questions.

Assume you and your friend are equally skilled at a game. If you were to play them at this game 100 times, how often do you think you would win (assuming this game does not have ties)?

About time(s) out of the 100 games

[Continue](#)

Study 3: introduce task

Boulder Sliding

You are an athlete in the up and coming sport of boulder sliding, where the goal is to slide your boulder farther than your competitor's boulder.

You are heading into a championship match against another athlete named Blorg.

In the championship match, you and Blorg each have one chance to slide your respective boulders.

Whoever slides their boulder farther wins **250 Ice Dollars**.

A Decision

Assume that you and Blorg are equally skilled such that if you both use a **standard boulder**, you are both equally likely to win.

You read in the newspaper that there is a **premium boulder** you can rent that is different than the **standard boulder** that Blorg will use. The newspaper reported on a recent study that found that the **premium boulder** slid farther than the **standard boulder** on average in their tests.

It is perfectly within the rules for you to rent this boulder.

However, the rental is good for only one use and it is not free.

You can be certain that Blorg WILL NOT rent a premium boulder.

We're going to ask you how much you would be willing to pay for the **premium boulder**, but before we do you'll see some statistics to aid in your decision.

[Click here to confirm you understand the statistics about you and Blorg.](#)

[Continue](#)

Study 3: show variability in Individual Outcome (probability of superiority + height analogy condition)

Additional information to help you estimate and decide

Roughly speaking, if you were to play 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, you would expect to win **57** times. To put that in perspective, the **premium boulder** will beat the **standard boulder** about as often as a **randomly selected 16 year old is taller than a randomly selected 15 year old**, among American women.

Click here to confirm you understand.

Continue



Additional information to help you estimate and decide

Roughly speaking, if you were to play 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, you would expect to win **57** times. To put that in perspective, the **premium boulder** will beat the **standard boulder** about as often as a **randomly selected 16 year old is taller than a randomly selected 15 year old**, among American women.

A chance to revise your responses

Chance of Winning

Based on the additional information above, if you were to compete with Blorg 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, what is your best estimate of the number of times you would win? (Previously, you said you would win **time**)

 Time(s)

Willingness to Pay

Based on the additional information above, given that **you'll win 250 Ice Dollars if you beat Blorg, but nothing if you lose**, what is the most you would be willing to pay to use the **premium boulder**? (Previously, you said you would pay up to **Ice Dollars**)

 Ice Dollar(s)

Your revised response indicates that you would be willing to pay up to **Ice Dollar(s)** (but no more) for the **premium boulder**. If you win, you will be ahead **Ice Dollar(s)**, which is the **250** you won minus the **Ice Dollar(s)** that you spent on the boulder. If you lose, you will be out **Ice Dollar(s)**. Click "Continue" below if this is what you want, or update your answer.

Continue

Study 3: show variability in Individual Outcome (probability of superiority + variance condition)

Additional information to help you estimate and decide

Roughly speaking, if you were to play 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, you would expect to win 57 times.

Variation in your sliding distances with the standard boulder: Roughly speaking, 95% of your next 1,000 slides would be between **70** and **130** meters, with approximately equal percentages of slides falling short of **70** meters or long of **130** meters.

Variation in your sliding distances with the premium boulder: Roughly speaking, 95% of your next 1,000 slides would be between **74** and **134** meters, with approximately equal percentages of slides falling short of **74** meters or long of **134** meters.

Click here to confirm you understand.

Continue



Additional information to help you estimate and decide

Roughly speaking, if you were to play 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, you would expect to win **57** times.

Variation in your sliding distances with the standard boulder: Roughly speaking, 95% of your next 1,000 slides would be between **70** and **130** meters, with approximately equal percentages of slides falling short of **70** meters or long of **130** meters.

Variation in your sliding distances with the premium boulder: Roughly speaking, 95% of your next 1,000 slides would be between **74** and **134** meters, with approximately equal percentages of slides falling short of **74** meters or long of **134** meters.

A chance to revise your responses

Chance of Winning

Based on the additional information above, if you were to compete with Blorg 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, what is your best estimate of the number of times you would win? (Previously, you said you would win **time**)

Time(s)

Willingness to Pay

Based on the additional information above, given that **you'll win 250 Ice Dollars if you beat Blorg, but nothing if you lose**, what is the most you would be willing to pay to use the **premium boulder**? (Previously, you said you would pay up to **Ice Dollars**)

Ice Dollar(s)

Your revised response indicates that you would be willing to pay up to **Ice Dollar(s)** (but no more) for the **premium boulder**. If you win, you will be ahead **Ice Dollar(s)**, which is the **250** you won minus the **Ice Dollar(s)** that you spent on the boulder. If you lose, you will be out **Ice Dollar(s)**. Click "Continue" below if this is what you want, or update your answer.

Continue

Study 3: show variability in Individual Outcome (probability of superiority + weather analogy condition)

Additional information to help you estimate and decide

Roughly speaking, if you were to play 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, you would expect to win 57 times. To put that in perspective, the **premium boulder** will beat the **standard boulder** about as often as the maximum temperature on **February 15th** is higher than the maximum temperature on **January 15th** in New York City.

Click here to confirm you understand.

Continue



Additional information to help you estimate and decide

Roughly speaking, if you were to play 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, you would expect to win 57 times. To put that in perspective, the **premium boulder** will beat the **standard boulder** about as often as the maximum temperature on **February 15th** is higher than the maximum temperature on **January 15th** in New York City.

A chance to revise your responses

Chance of Winning

Based on the additional information above, if you were to compete with Blorg 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, what is your best estimate of the number of times you would win? (Previously, you said you would win **time**)

 Time(s)

Willingness to Pay

Based on the additional information above, given that **you'll win 250 Ice Dollars if you beat Blorg, but nothing if you lose**, what is the most you would be willing to pay to use the **premium boulder**? (Previously, you said you would pay up to **Ice Dollars**)

 Ice Dollar(s)

Your revised response indicates that you would be willing to pay up to **Ice Dollar(s)** (but no more) for the **premium boulder**. If you win, you will be ahead **Ice Dollar(s)**, which is the **250** you won minus the **Ice Dollar(s)** that you spent on the boulder. If you lose, you will be out **Ice Dollar(s)**. Click "Continue" below if this is what you want, or update your answer.

Continue

Study 3: show variability in Individual Outcome (probability of superiority + category condition)

Additional information to help you estimate and decide

Roughly speaking, if you were to play 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, you would expect to win **57** times.

The difference in the average sliding distance between the **standard boulder** and the **premium boulder** is **small** relative to how much individual slides vary around their long-run average.

Click here to confirm you understand.

Continue



Additional information to help you estimate and decide

Roughly speaking, if you were to play 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, you would expect to win **57** times.

The difference in the average sliding distance between the **standard boulder** and the **premium boulder** is **small** relative to how much individual slides vary around their long-run average.

A chance to revise your responses

Chance of Winning

Based on the additional information above, if you were to compete with Blorg 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, what is your best estimate of the number of times you would win? (Previously, you said you would win **time**)

Time(s)

Willingness to Pay

Based on the additional information above, given that **you'll win 250 Ice Dollars if you beat Blorg, but nothing if you lose**, what is the most you would be willing to pay to use the **premium boulder**? (Previously, you said you would pay up to **Ice Dollars**)

Ice Dollar(s)

Your revised response indicates that you would be willing to pay up to **Ice Dollar(s)** (but no more) for the **premium boulder**. If you win, you will be ahead **Ice Dollar(s)**, which is the **250** you won minus the **Ice Dollar(s)** that you spent on the boulder. If you lose, you will be out **Ice Dollar(s)**. Click "Continue" below if this is what you want, or update your answer.

Continue

Study 3: post-task questions

Same as Study 2

Study 3: submit page

Thank you!

One last question.

Your response indicates that you would be willing to pay up to **20 Ice Dollars** for the **premium boulder**. Which of the following statements best describes your decision to pay 20 Ice Dollars?

- I was considering the prize money that I would get if I won.
- I was considering the feeling of winning.
- I was considering the prize money that I would get if I won. And I was considering the feeling of winning.
- None of above

Please leave feedback or comments (optional).

You must click the submit button below to turn in your answers and complete the HIT.

[Submit answers back to turk](#)

1) Study interface – Study 4

Study 4: Intro

Estimating Uncertain Events

In this task, you will read a problem and be asked some related questions. This task is part of a research project on decision making. We are interested in how well you do on the task without the help of external resources. You will be compensated \$1.0 for your participation.

Study 4: training

Practice Question

In this HIT, you will be asked to make a decision on an uncertain event. This short training will show you how to respond to the questions.

Assume you and your friend are equally skilled at a game. If you were to play them at this game 100 times, how often do you think you would win (assuming this game does not have ties)?

About time(s) out of the 100 games

[Continue](#)

Study 4: introduce task

Boulder Sliding

You are an athlete in the up and coming sport of boulder sliding, where the goal is to slide your boulder farther than your competitor's boulder.

You are heading into a championship match against another athlete named Blorg.

In the championship match, you and Blorg each have one chance to slide your respective boulders.

Whoever slides their boulder farther wins **250 Ice Dollars**.

A Decision

Assume that you and Blorg are equally skilled such that if you both use a **standard boulder**, you are both equally likely to win.

You read in the newspaper that there is a **premium boulder** you can rent that is different than the **standard boulder** that Blorg will use. The newspaper reported on a recent study that found that the **premium boulder** slid farther than the **standard boulder** on average in their tests.

It is perfectly within the rules for you to rent this boulder.

However, the rental is good for only one use and it is not free.

You can be certain that Blorg WILL NOT rent a premium boulder.

We're going to ask you how much you would be willing to pay for the **premium boulder**, but before we do you'll see some statistics to aid in your decision.

[Click here to confirm you understand the statistics about you and Blorg.](#)

[Continue](#)

Study 4: show mean difference (percentage difference condition)

Some information about the standard boulder and the premium boulder

Here are information for an athlete like you.

The recent study found in their tests that the **premium boulder** slid 4% farther than the **standard boulder** on average.

Estimation & Decision

Chance of Winning

If you were to compete with Blorg 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, what is your best estimate of the number of times you would win?

Time(s)

Willingness to Pay

Given that **you'll win 250 Ice Dollars if you beat Blorg, but nothing if you lose**, what is the most you would be willing to pay to use the **premium boulder**?

Ice Dollar(s)

Your response indicates that you would be willing to pay up to _____ **Ice Dollar(s)** (but no more) for the **premium boulder**. If you win, you will be ahead _____ **Ice Dollar(s)**, which is the **250** you won minus the _____ that you spent on the boulder. If you lose, you will be out _____ **Ice Dollar(s)**. Click "Continue" below if this is what you want, or update your answer.

Study 4: show mean difference (absolute difference condition)

Some information about the standard boulder and the premium boulder

Here are information for an athlete like you.

The recent study found in their tests that the **premium boulder** slid 4 meters farther than the **standard boulder** on average.

Estimation & Decision

Chance of Winning

If you were to compete with Blorg 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, what is your best estimate of the number of times you would win?

Time(s)

Willingness to Pay

Given that **you'll win 250 Ice Dollars if you beat Blorg, but nothing if you lose**, what is the most you would be willing to pay to use the **premium boulder**?

Ice Dollar(s)

Your response indicates that you would be willing to pay up to _____ **Ice Dollar(s)** (but no more) for the **premium boulder**. If you win, you will be ahead _____ **Ice Dollar(s)**, which is the **250** you won minus the _____ that you spent on the boulder. If you lose, you will be out _____ **Ice Dollar(s)**. Click "Continue" below if this is what you want, or update your answer.

Study 4: show mean difference (directional statement condition)

Some information about the standard boulder and the premium boulder

Again, the recent study found in their tests that the **premium boulder** slid farther than the **standard boulder** that Blorg will use, on average.

Estimation & Decision

Chance of Winning

If you were to compete with Blorg 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, what is your best estimate of the number of times you would win?

Time(s)

Willingness to Pay

Given that **you'll win 250 Ice Dollars if you beat Blorg, but nothing if you lose**, what is the most you would be willing to pay to use the **premium boulder**?

Ice Dollar(s)

Your response indicates that you would be willing to pay up to _____ **Ice Dollar(s)** (but no more) for the **premium boulder**. If you win, you will be ahead _____ **Ice Dollar(s)**, which is the **250** you won minus the _____ that you spent on the boulder. If you lose, you will be out _____ **Ice Dollar(s)**. Click "Continue" below if this is what you want, or update your answer.

Study 4: show mean difference (CI without visualization condition)

Some information about the standard boulder and the premium boulder

Here are some statistics, based on estimates for an athlete like you.

- **Your average sliding distance with the standard boulder:** If you were to slide the **standard boulder** 1,000 times, you would attain an **average** distance of **100** meters. A 95% confidence interval on your average sliding distance with a **standard boulder** is **99 to 101** meters.
- **Your average sliding distance with the premium boulder:** If you were to slide the **premium boulder** 1,000 times, you would attain an **average** distance of **104** meters. A 95% confidence interval on your average sliding distance with a **premium boulder** is **103 to 105** meters.

**A 95% confidence interval conveys the uncertainty in estimating your true average sliding distance. It is constructed such that if we watched many such sessions of 1,000 slides and repeated this process, 95% of the constructed intervals would contain your true average.

Estimation & Decision

Chance of Winning

If you were to compete with Blorg 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, what is your best estimate of the number of times you would win?

Time(s)

Willingness to Pay

Given that **you'll win 250 Ice Dollars if you beat Blorg, but nothing if you lose**, what is the most you would be willing to pay to use the **premium boulder**?

Ice Dollar(s)

Your response indicates that you would be willing to pay up to _____ **Ice Dollar(s)** (but no more) for the **premium boulder**. If you win, you will be ahead _____ **Ice Dollar(s)**, which is the **250** you won minus the _____ that you spent on the boulder. If you lose, you will be out _____ **Ice Dollar(s)**. Click "Continue" below if this is what you want, or update your answer.

[Continue](#)

Study 4: show transition (all conditions)

Now, we will give you more information about the standard boulder and the **premium boulder** to help you better estimate the chance of winning and decide how much you are willing to pay for the **premium boulder**.

Click here to confirm you understand.

Continue

Study 4: show variability in Individual Outcome (All condition)

Additional information to help you estimate and decide

Roughly speaking, if you were to play 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, you would expect to win **57** times.

Click here to confirm you understand.

Continue



Additional information to help you estimate and decide

Roughly speaking, if you were to play 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, you would expect to win **57** times.

A chance to revise your responses

Chance of Winning

Based on the additional information above, if you were to compete with Blorg 100 times where you had the **premium boulder** and Blorg had a **standard boulder**, what is your best estimate of the number of times you would win? (Previously, you said you would win **time**)

 Time(s)

Willingness to Pay

Based on the additional information above, given that **you'll win 250 Ice Dollars if you beat Blorg, but nothing if you lose**, what is the most you would be willing to pay to use the **premium boulder**? (Previously, you said you would pay up to **Ice Dollars**)

 Ice Dollar(s)

Your revised response indicates that you would be willing to pay up to **Ice Dollar(s)** (but no more) for the **premium boulder**. If you win, you will be ahead **Ice Dollar(s)**, which is the **250** you won minus the **Ice Dollar(s)** that you spent on the boulder. If you lose, you will be out **Ice Dollar(s)**. Click "Continue" below if this is what you want, or update your answer.

Continue

Study 4: post-task questions

Same as Study 2 and Study3

Study 4: submit page

Thank you!

One last question.

Your response indicates that you would be willing to pay up to **20 Ice Dollars** for the **premium boulder**. Which of the following statements best describes your decision to pay 20 Ice Dollars?

- I was considering the prize money that I would get if I won.
- I was considering the feeling of winning.
- I was considering the prize money that I would get if I won. And I was considering the feeling of winning.
- None of above

Please leave feedback or comments (optional).

You must click the submit button below to turn in your answers and complete the HIT.

[Submit answers back to turk](#)

2) Additional analysis

- a) People who revised their responses of probability of superiority
for standard boulder/height analogy/weather analogy

Revised response

	Standard Boulder	Height analogy	Weather analogy
Revision	3.9% (162/4200)	4.4% (186/4200)	12.0% (506/4200)
No revision	96.1% (4038/4200)	95.6% (4014/4200)	88.0% (3694/4200)

2) Additional analysis

b) Motivation to pay

Motivation to pay (from studies 1,2,3, and 4)

I was considering the prize money that I would get if I won (3265/4950, 66.0%)

I was considering the prize money that I would get if I won. And I was considering the feeling of winning (1044/4950, 21.1%)

I was considering the feeling of winning (256/4950, 5.2%)

None of above (385/4950, 7.8%)