Individual tasks: Phase 1
Battery A

Informed Consent Form

PURPOSE OF RESEARCH STUDY: To understand the relationship between measures of social skill and fluid intelligence.

WHAT YOU'LL DO: You will be asked to solve puzzles, perform memory tasks, and identify people's emotions based on photographs. The online tasks (which you can do at home) should take around 50 minutes. Then participants will come into the lab TWICE. The first session will take less than an hour. The second session will take around 80 minutes. Both times you'll be working on puzzles and problems with a small group of people.

RISKS: There are no risks for participating in this study beyond those associated with normal computer use, including fatigue and mild stress.

COMPENSATION: Overall, compensation for this experiment will be $90. This requires participants to complete these online tasks and to come to **two** lab sessions.

PLEASE NOTE: This study contains a number of checks to make sure that participants are finishing the tasks honestly and completely. Also, please be aware that we will be recording lab sessions, and analyzing group communication.

VOLUNTARY PARTICIPATION AND RIGHT TO WITHDRAW: Participation in this study is voluntary, and you can stop at any time without any penalty. To stop, simply close your browser window. Partial data will not be analyzed.

CONFIDENTIALITY: All data collected as part of this study will be anonymized (and personal information, such as your email address, will be removed).

CONTACT INFORMATION: If you have any questions about this research, you may contact: Ben Weidmann at benweidmann@g.harvard.edu, or David Deming at david_deming@harvard.edu

CLICKING ACCEPT: By clicking on the "I Consent" button, you indicate that you are 18 years of age or older, that you voluntarily agree to participate in this study and that you understand the information in this consent form.

I Do Not Consent

I Consent

Eligibility Notice

Our study requires participants who try their best in these Online Tasks. If you skip through questions, or don't read the instructions, your responses cannot be used.

Our tasks contain checks to see whether or not you're reading the instructions and the questions.

Everybody who makes a genuine attempt to answer the questions will be eligible for the Superteams study, regardless of your score.

Click "I agree" if you would like to proceed. If not, thank you for your time!

I Do Not Agree

I Agree

Welcome to the online component of the Superteams study!

Over the next **50 minutes** you will complete a range of different tasks. Our goal is to understand how well you solve problems, your ability to perceive emotions in others, and your short-term memory. This is a research study and your answers are important.

There are 5 tasks to complete. Some tasks take slightly longer than others, but not more than 15 minutes. Feel free to take a break between tasks.

If you have to stop, that's OK. Your answers will be saved. To continue, come back to this website (http://teamwork.harvarddecisionlab.org/individual-login/hdsl) re-enter the **same** email address, then pick up where you left off.

Note: These tasks **must** be done on a laptop or desktop computer. They **cannot** be done on a mobile phone or tablet. If you do not have access to a computer, please feel free to come to the lab and complete the tasks there.

Next

Personality Test

Task 1 of 5

We'll start with some basic questions about personality.

This will take about 10 minutes. Remember, your answers will be kept in absolute confidence, and deleted at the conclusion of the study.

Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as honestly as you can, compared to other people you know of roughly the same age and sex.

Continue

Example items

In relation to other people of the same gender who are roughly the same age, I would say that I:

	Very True	Somewhat True	Neither true nor untrue	Moderately Untrue	Very Untrue
Insult people.	○	○	○	○	○
Show my gratitude.	○	○	○	○	○
Like to tidy up.	○	○	○	○	○
Find it difficult to get down to work.	○	○	○	○	○
Love to help others.	○	○	○	○	○
Often forget to put things back in their proper place.	○	○	○	○	○
Take time out for others.	○	○	○	○	○
Think of others first.	○	○	○	○	○
Talk to a lot of different people at parties.	○	○	○	○	○
Am the life of the party.	○	○	○	○	○

Next ⇨ 1 / 5

Shapes Task

Task 2 of 5

This task is about understanding patterns and identifying what comes next.

Next ⇨

In this task you'll be presented with a grid of shapes in the upper part of the page.

The grid will have 3 rows, and 3 columns. There will be a missing piece.

On the bottom part of the page will be a set of 8 options. One of these options is the missing piece. Your job is to find this missing piece.

The missing piece is the one that fits the patterns that appear across the rows and columns.

We'll start with a practice.

⇦ Back Next ⇨

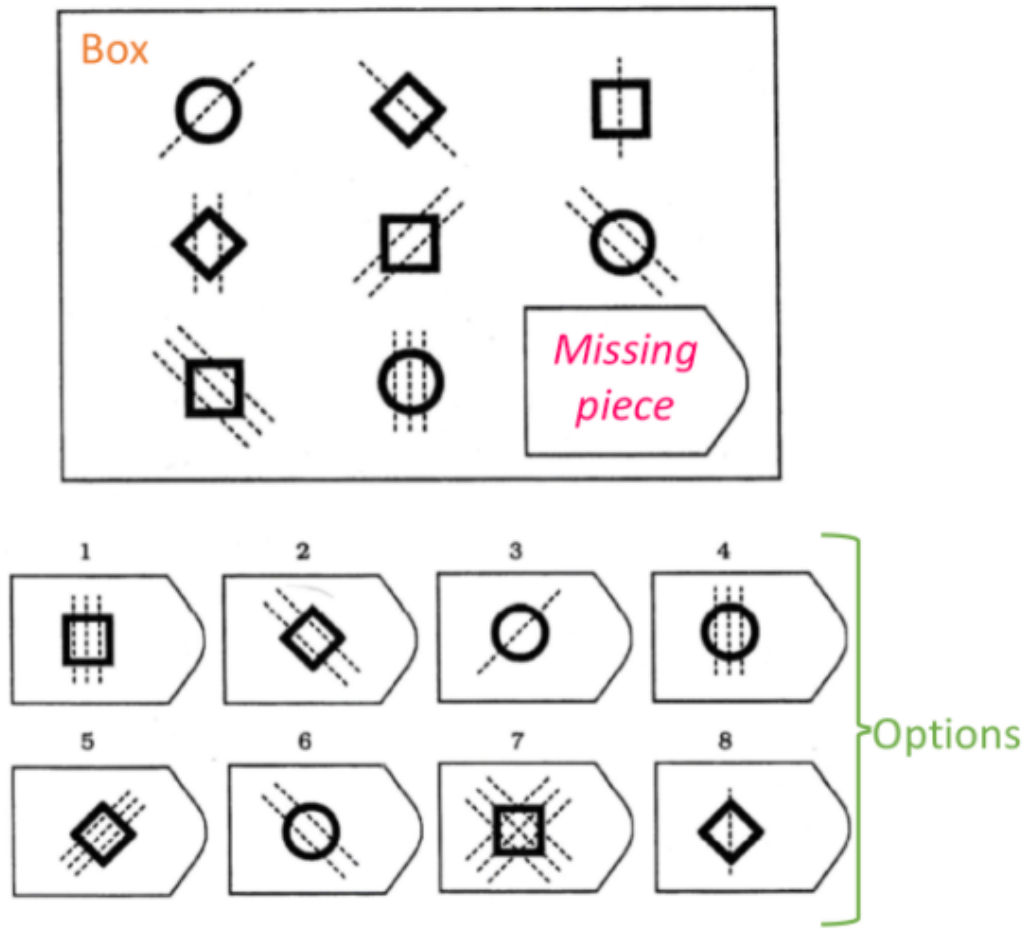
Look at the box on the right. It has a missing piece.

Your task is to find the missing piece from the options at the bottom of the page.

Look for patterns in the box. In this example, you can see that each row has a square, a circle and a diamond. This is also true of each column. The missing piece must therefore have a diamond shape.

Also, notice that the shapes on the top row have 1 dotted line through them. Those in the middle row have 2 dotted lines, and in the bottom row it's 3. The missing piece must have 3 dotted lines.

Looking at the options, the only diamond with three dotted lines is number 5. This is the missing piece.



⇦ Back Next ⇨

After clicking the "next" button the task will begin.

There are 14 questions and you have 7 minutes. You may not have time to finish all the questions, but you should work as quickly as you can.

There will be a timer in the top right of your screen.

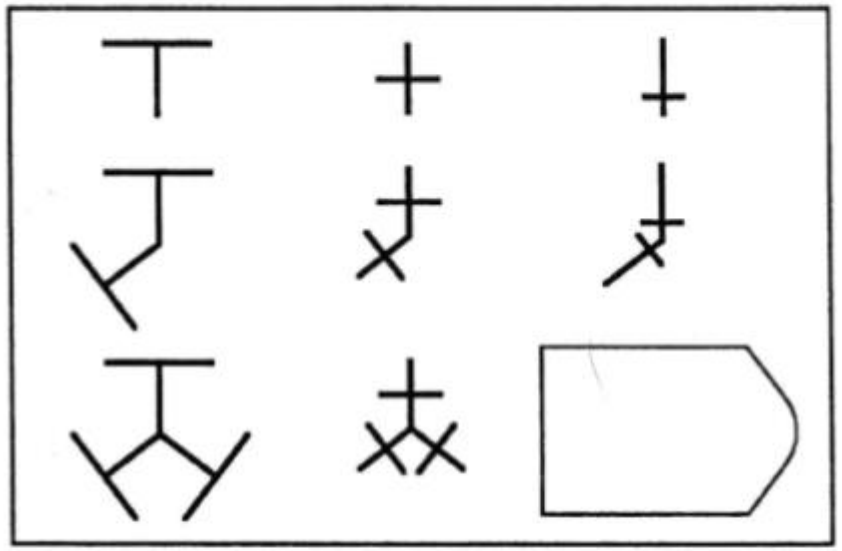
You may change your answers if you change your mind, but not after the 7 minutes is up.

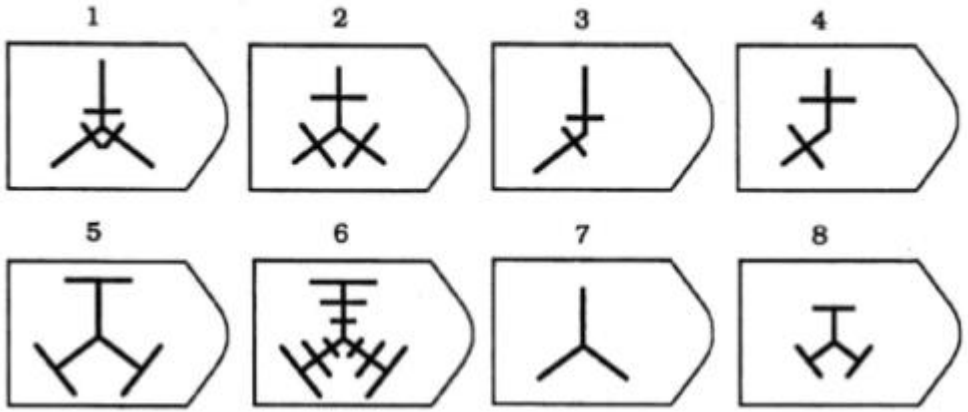
Click "Next" to begin!

⇦ Back Next ⇨

Example item

06:56





What is the missing piece?
Select your answer here

---- ⌄

Next ⇨

1 / 14

Reading the Mind in the Eyes Task

Task 3 of 5

In this task, you'll be presented with pictures of people's eyes. Your job is to draw conclusions about what the person is thinking or feeling.

This task isn't timed; it should not take more than 10 minutes.

The next page has more detailed instructions.

Next ⇨

Reading the Mind in the Eyes Task

For each set of eyes, select the word that best describes what the person in the picture is thinking or feeling. You may feel that more than one word is applicable but please choose just the word which you consider to be most suitable.

Before making your choice, make sure that you have read all 4 words. If you don't know what a word means you can click on it. Your computer will open a new page that defines the word. After reading the definition, return to this page and continue the task.

When you hit Next, the task will begin.

⇦ Back Next ⇨

Example item

- ○ terrified
- ◉ upset
- ○ arrogant
- ○ annoyed

Next ⇨

Note: each word was hyperlinked to the dictionary.com definition.

Optimization Task

Task 4 of 5

The goal of this task is to try to find the number (between 0 and 300) that results in your computer returning the biggest possible value. You will have 15 guesses. A guess can be any number between 0 and 300.

After you enter your guess, the computer will give you back a number. There is a systematic relationship between the number you guess, and the number you receive, but the relationship may be difficult to understand. Usually, numbers that are close to each other will receive very similar outputs.

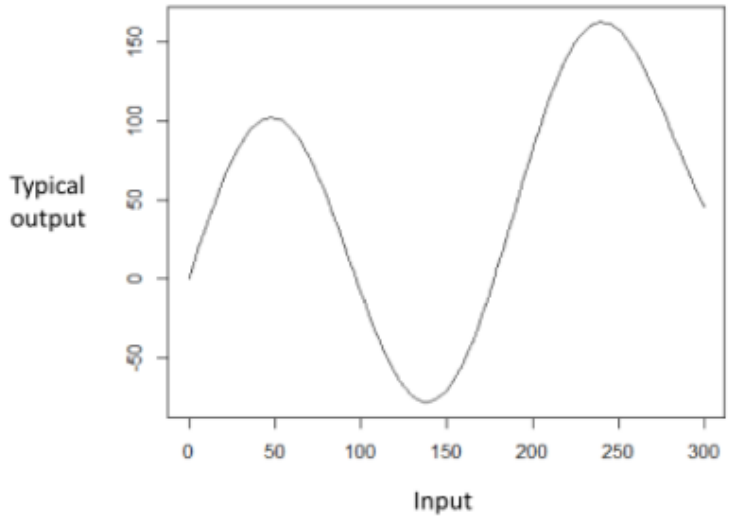
After your 15 guesses, you will be asked to enter the number that you believe gives the highest response. **It is only this final answer - which you will enter after the prompt - that determines your score!**

Next ⇨

Practice

Optimization Practice

Let's start with a practice. Say the underlying relationship (which you won't know) looks like this:



In this example, you get the biggest result when you enter 240. Practice entering numbers, and look at the results; then hit next

Enter Practice Guess

Guess #	Your guess	Result

⇦ Back Next ⇨

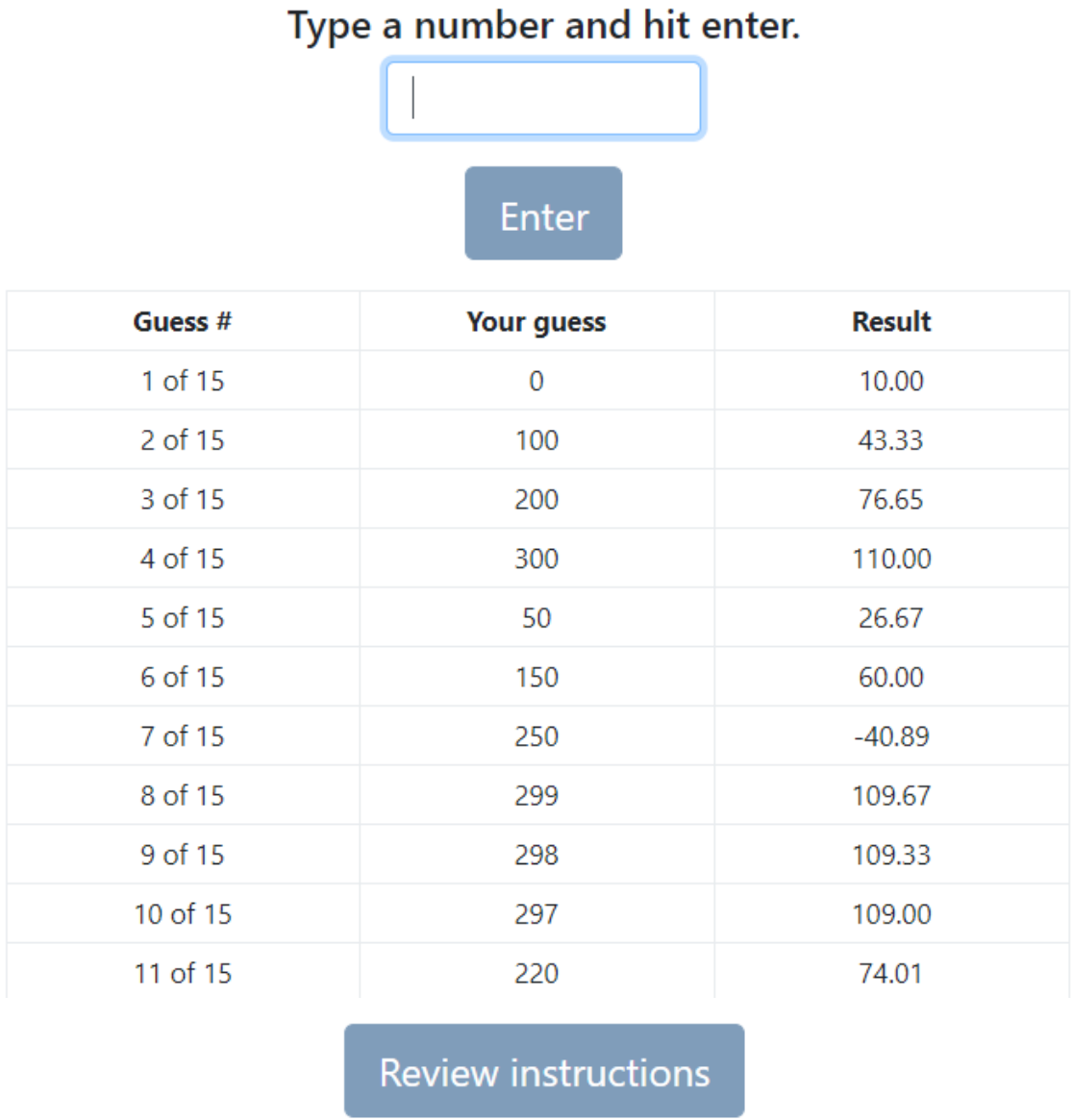
Now, you will do the optimization task 3 separate times. Each time, there will be a different underlying relationship. Each time, you will have 15 guesses to try to find a number that gives you a big value in return.

This task isn't timed, but most people take less than ten minutes in total.

⇦ Back Next ⇨

Example item

This is a screenshot taken when a participant had entered 11 of their 15 guesses



Your next guess is your final answer. Remember, it is only this final guess that matters for your score. Based on your previous 15 guesses, type the number that you think will result in the biggest value.

Ok

3 of 15	200	76.65
4 of 15	300	110.00
5 of 15	50	26.67
6 of 15	150	60.00
7 of 15	250	-40.89
8 of 15	299	109.67
9 of 15	298	109.33
10 of 15	297	109.00
11 of 15	220	74.01
12 of 15	199	76.32
13 of 15	201	76.97

Example item

At this point, the participant entered their Final Answer (which in this case, was the optimal value)

Enter your final answer

300

Enter

Guess #	Your guess	Result
1 of 15	0	10.00
2 of 15	100	43.33
3 of 15	200	76.65
4 of 15	300	110.00
5 of 15	50	26.67
6 of 15	150	60.00
7 of 15	250	-40.89
8 of 15	299	109.67
9 of 15	298	109.33
10 of 15	297	109.00
11 of 15	220	74.01
12 of 15	199	76.32
13 of 15	201	76.97
14 of 15	300	110.00
15 of 15	149	59.67

Memory Task

Task 5 of 5

Last are some tests of memory.
We will test three different types of memory.

- Image memory
- Word memory
- Story memory

The tests are short. In total, all the memory tests will take around 10 minutes.

Please do NOT write anything down during these tasks.

Next ⇨

Practice

Word Memory

In this task, you'll be presented with a set of "target words". Each word will show up separately for 2 seconds. We'll start with a practice. In the practice round, you only have to remember 3 target words. This will not count toward your score, but will indicate whether you have read and understood the instructions, so please answer all questions carefully.

Continue

Practice

red

Practice

Which of the following are target words?
Select all that apply, then click "Next"

red	rust	blue
☐	☐	☐

Next

Now for the actual task. You will be presented with 12 target words. Try to remember all of them. Each word will show up separately for 2 seconds. You're not allowed to write anything down. The words will begin to appear when you click "Continue".

Continue

Example item

Which of the following are target words
Select all that apply, then click "Next"

house ☐

tiger ☐

hut ☐

Next

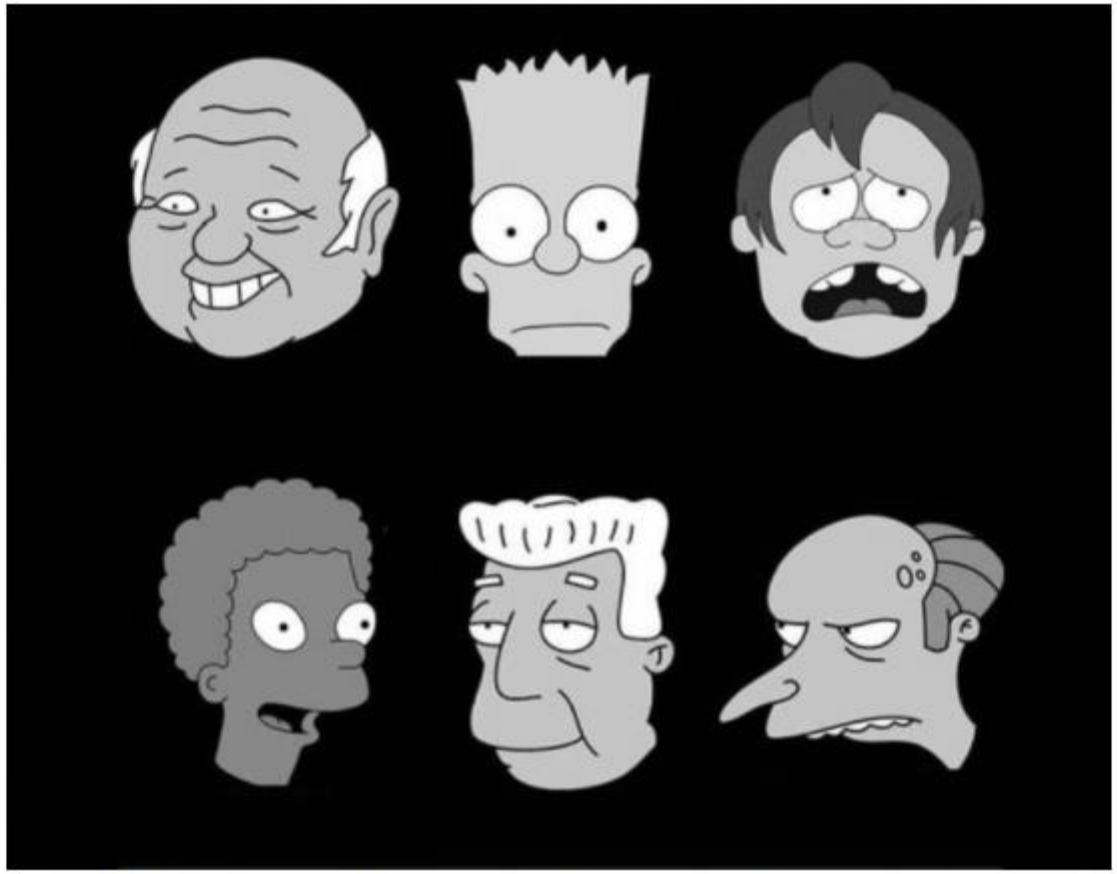
Image Memory

In this task, you'll be presented with a set of images (for example, 6 faces). There will be 6 images to memorize. We'll call these "target images". We'll start with a practice.

Continue

Practice

Look at these 6 faces for a few seconds. We'll call these "target faces".



Press continue when you're ready!

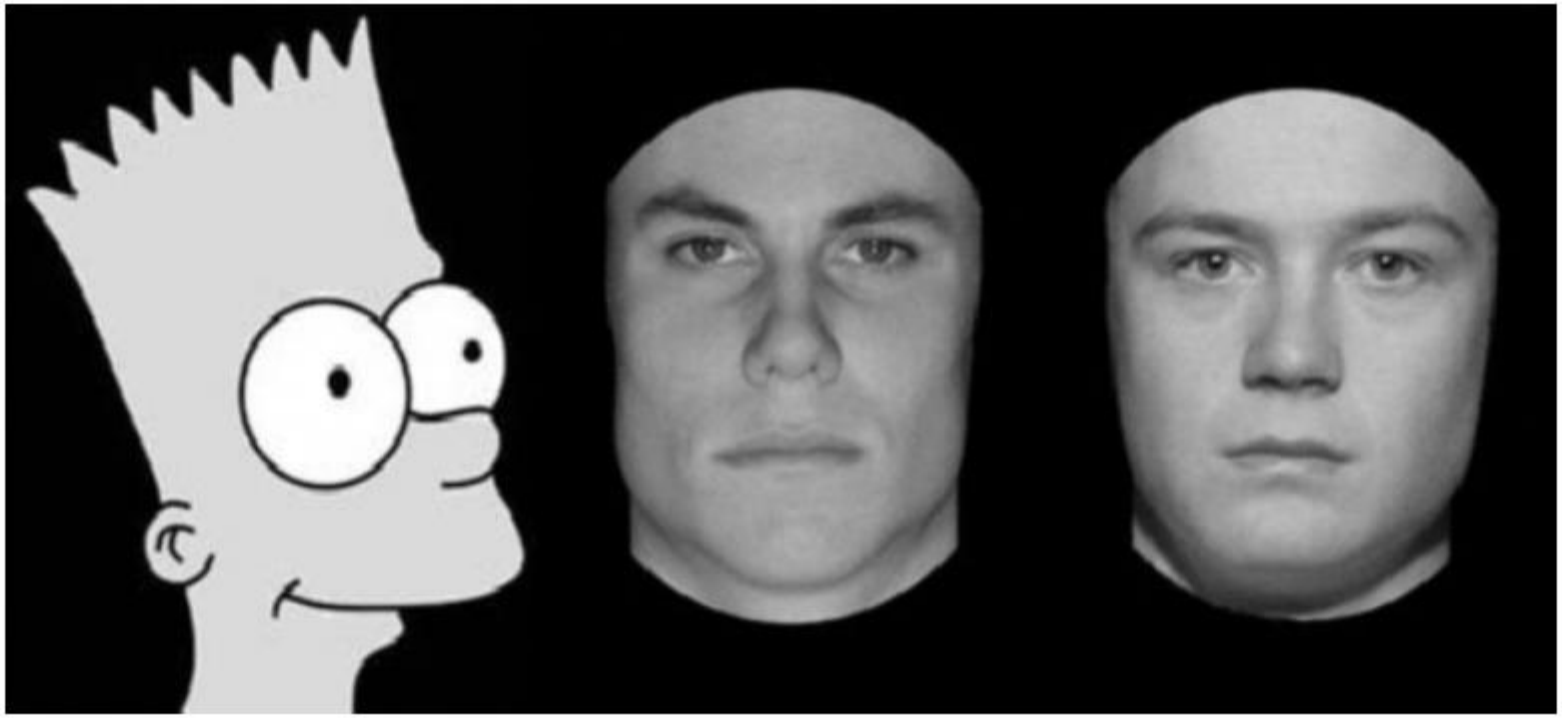
Continue

Practice

Which of the following faces is a "target" face?

Type [1], [2], or [3]

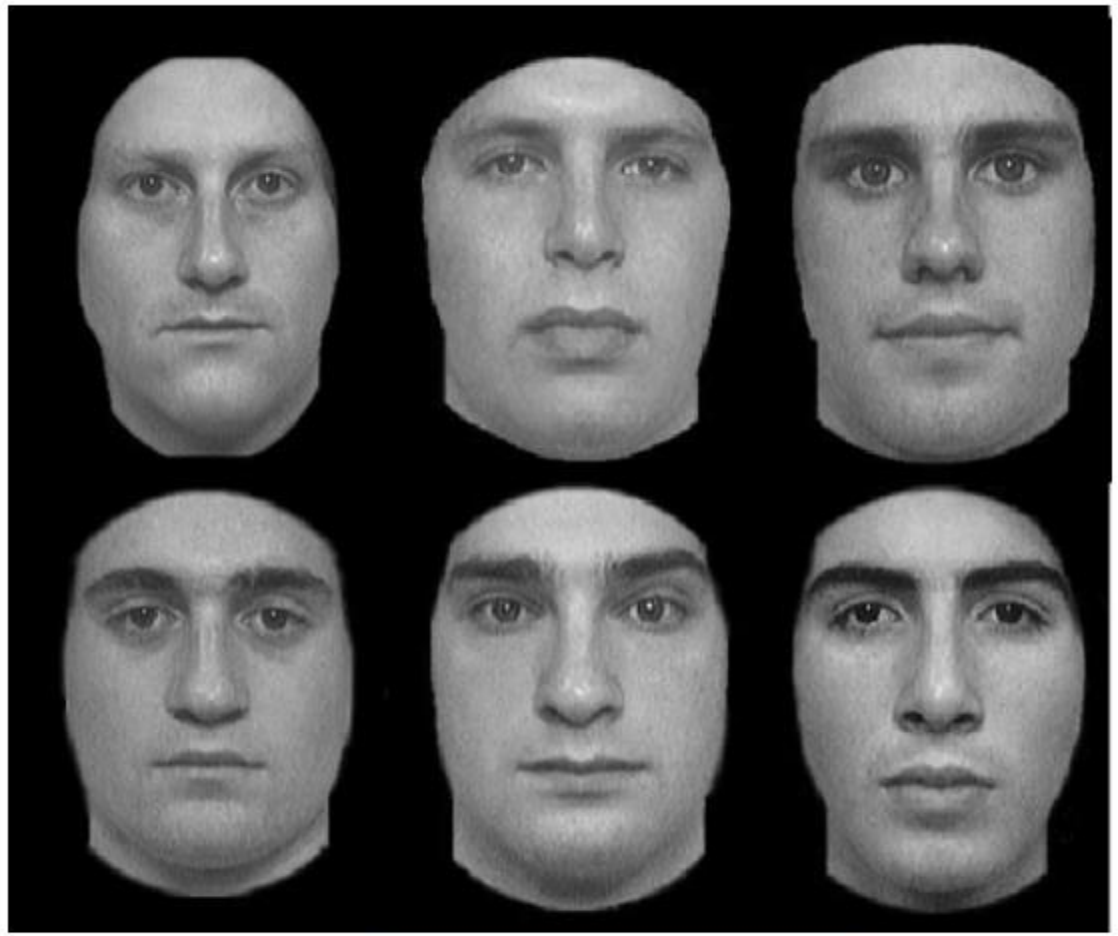
Note: You need to type the number on your keyboard



1 2 3

Now for the actual task. When you click "Continue" a screen will appear with 6 target images. You can view the images front-on or in profile. Click the "change perspective" button to see them from a different angle. You will have 20 seconds to memorize these target images.

Continue



Change Perspective

Example item

Which of the following images is a "target" face?

Type [1], [2], or [3]

Note: You need to type the number on your keyboard

1 2 3

Story Memory

This memory task asks you to remember two very short stories. Once again, we'll start with a practice. In the practice round each "story" will only have one sentence.

Continue

Practice

Practice:

Read these two 'stories' quickly but carefully. When you're finished click continue.

1: Peter was hungry, so he went to the store on the corner of his street and bought a hamburger.

2: Yesterday, a local woman found a 10-foot crocodile in her kitchen, an event the fire department described as "unusual".

Continue

Practice

Why did Peter go to the store?

Type [1], [2], or [3]

1) Because he was hungry
2) To get coffee
3) To buy food for his dog

Now for the actual task. You will be presented with two longer stories. You will have 30 seconds to read them. Try to take in as much information as possible. There is a timer in the top right of the screen. After the 30 seconds are up, we'll ask you some questions about the stories. Your 30 seconds will start when you hit continue.

Continue

1: Anna Thompson of South Boston, a cook in a school cafeteria, reported to the police that she had been robbed of $56 on State Street the night before last. She had four small children, the rent was due, and they had not eaten for two days. The police, touched by the woman's story, collected money for her.

2: A 67 year old woman in Greensville, Florida used a black umbrella to stop an attack by two men. The woman was walking down Main Street when the attackers got out of a yellow pickup and approached her. She hit one with her umbrella and the other man fled. Both men were arrested by police.

Example item

On what street was Anna Thompson robbed?

Type [1], [2], or [3]

1) State Street
2) Main Street
3) Sixth Street

Feedback for participants

Congratulations on completing the memory challenge.

Compared to other participants in this study, you did **better** than roughly:

80% on words

70% on images

30% on stories

Compared to others, your strongest memory skill is WORDS

Press the button below to continue.

Continue

Please tell us a bit about yourself...

What is your gender

- Male
- Female
- Other
- I decline to answer

What is the highest level of education you have completed (or are currently attending):

- Some high school
- High school diploma or GED
- Some college
- Associate Degree
- Bachelors Degree
- Some graduate school
- Graduate or professional degree
- I decline to answer

You identify as:

- African American (non-Hispanic)
- Asian / Pacific Islander
- Caucasian (non-Hispanic)
- Latino or Hispanic
- Native American, Aleut, or Aboriginal Peoples
- Mixed Race
- Other
- I decline to answer

What is the year of your birth?

- 1950 or earlier
- 1951 - 1960
- 1961 - 1965
- 1966 - 1970
- 1971 - 1975
- 1976 - 1980
- 1981 - 1985
- 1986 - 1990
- 1991 - 1994
- 1995 - 1997
- 1998 - 2002
- I decline to answer

Next

Group Tasks: Phase 2
Examples come from Battery B

Welcome to your first group

You will be working together for around half an hour, trying to solve 3 tasks.
You've seen similar (or identical) tasks as individuals:

1. Optimization
2. Memory
3. Shapes

The main difference is that now you will be answering as a group.

Take a moment to introduce yourselves!

Next

Entering your Group's Answers

Your group will only submit one answer for each problem.

At this point, choose one member of your group to be "The Reporter". This person will be responsible for entering the group's answers.

Take a moment to discuss who will be The Reporter.

Please make sure that the Reporter is sitting in the middle of the three seats.

Next ⇨

Participants select among themselves who will be the "reporter"

I am the Reporter

I am NOT the Reporter

Apart from having seen them at the Lab, had you previously met either of your teammates? (e.g. friends, colleagues...)

- (●) No
- ( ) Yes

Next

Optimization Task

Task 1 of 3

Welcome to the first group task. It is very similar to the Optimization Task you completed as individuals. The main difference is that you will now be working in a group.

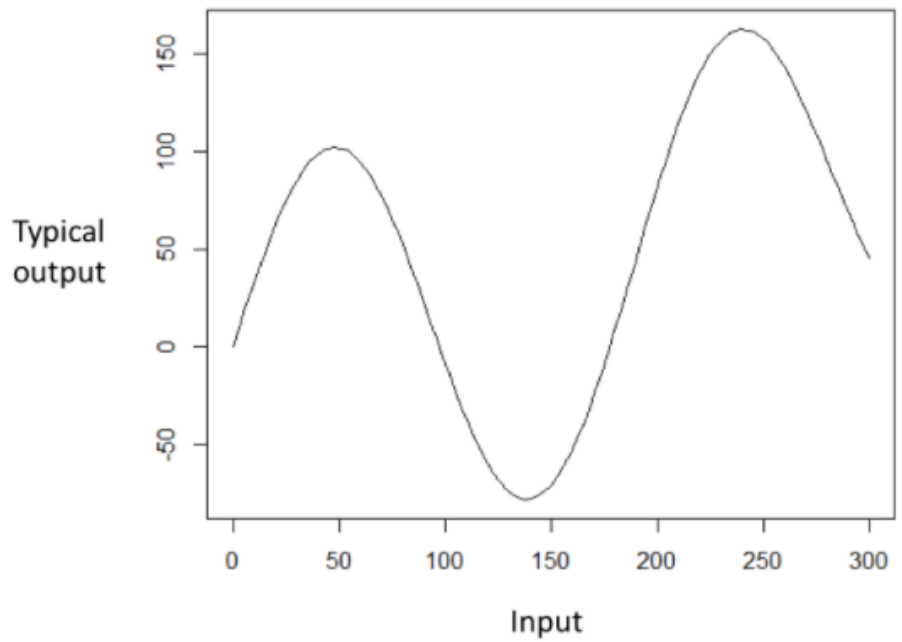
This is a group task where the goal is to try to find the number (between 0 and 300) that results in your computer returning the biggest possible value.

When all three group members have hit Next, the instructions will continue.

⇦ Back Next ⇨

Optimization Task

Every time you do the Optimization Task, the computer has a different "relationship" in mind. When you enter a guess, your computer uses this relationship to determine the number it gives you in return. Below is an example relationship:



As you can see, guesses around 240 result in particularly high values.

When all three members click next, we will have a **practice round**.

⇦ Back Next ⇨

Practice Round

Each of you will have 15 guesses in this practice round. In total, the group has 15 guesses.

After each of you has had 15 guesses, the computer will ask The Reporter to input the Group's Best Guess.

This practice round will not count towards your group's score.

You are NOT allowed to use pen and paper.

The practice round is **timed**. You have a total of four minutes.
We will give you a warning when you have 1 minute left.

⇦ Back Next ⇨

Practice Round

Enter your guess (between 0 and 300) below. You will have 5 individual guesses.

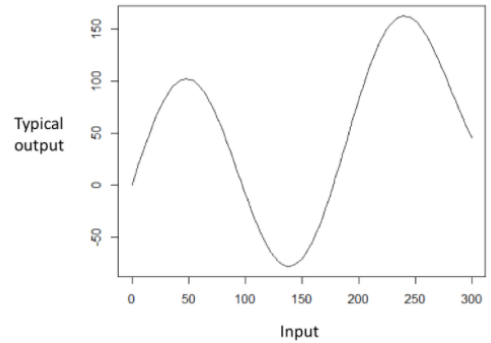
Enter Practice Guess

Guess #	Your guess	Result
1	1	3.33
2	22	67.47
3	200	81.86
4	120	-5

Review Instructions

Your group's goal is to find a number (between 0 and 300) that results in your computer returning the biggest possible value. You each have 15 guesses, which you enter into your own laptop. A guess can be any number between 0 and 300.

After you enter a guess, the computer will give you back a number. There is a relationship between the number you guess and the number the computer gives you. In the practice round, we tell you the relationship (you won't know this in the actual task):



After each person has had five guesses, the computer will ask the Reporter to enter the Group's Best Guess. In this example, the best guess is 244. The worst guess is 140.

Ok

You have now submitted all your guesses.
Please wait for everyone in your group to submit all their guesses. Once all 15 have been submitted, take a moment to look over all the guesses as a group.
Then, decide on your group's best guess.
When you have all agreed on a best guess, click Continue.

Continue

Practice Round

As the reporter, please enter your group's **FINAL ANSWER.**

Final answer:

Submit

Now for the actual task. Your group will do the Optimization Task 2 separate times. Each time, there will be a different relationship. Each time, your group will have 15 guesses (15 guesses each) to try to find a number that gives you a big value in return.

You will have four minutes for each set of guesses. There is a timer in the top right of the screen, and we will give you a warning when you have one minute remaining.

If you need to clarify the rules of the Optimization task you can click Review Practice Instructions at any time.

Spend a few moments discussing with your group how you will tackle the Optimization Task, then click "Next" to begin the task.

Review Instructions

⇦ Back Next ⇨

Optimization Task 1

03:05

Enter your guess (between 0 and 300) below. You will have 5 individual guesses.

Enter Practice Guess

Guess #	Your guess	Result
1	1	3.33
2	22	67.47
3	200	81.86
4	120	-59.68

Review Instructions

The next task is the same. The only change is that there is a new relationship between the numbers you guess and the numbers you receive in return.

If you need to, take a moment to discuss with your group, then click "Next" to begin the task.

Next ⇨

Optimization Task 2

00:35

Enter your guess (between 0 and 300) below. You will have 5 individual guesses.

Enter Practice Guess

Guess #	Your guess	Result
1	1	99.67
2	100	66.67
3	200	33.35

Review Instructions

Memory Task

Task 2 of 3

Next is a test of your group's collective memory. This will be similar to the individual memory tasks you completed earlier. We will ask you to remember images, words and stories.

The group task has a twist. **We'll ask you to memorize all three types of stimuli at the same time.**

We'll start with a practice round.

The practice will begin when all three members of your group have clicked "Next".

Next

Practice

Memory: practice round

This practice round will not count toward your group's score.

Your group has **20 seconds** to memorize **3** images, **6** words, and **2** very short stories.

During the memorization period, each person will look at their own laptop and try to memorize as much as they can. It is possible, but difficult, for one person to remember all three types of stimuli.

You are NOT allowed to write anything down.

Next

Practice

Practice Round

This is the page where you can choose what to memorize. We will ask your group about all three types of stimuli: Images, Words and Stories.

If you want, you can try to memorize several types of stimuli. For example, you might start with "Stories" (by clicking on the Stories button). Then, if you have time, you can click on a different button and try to memorize the Words and/or the Images.

Take a minute to discuss with your group how you'll approach this task.

Reminder: in this practice round there are 6 words; 3 images; and 2 very short stories.

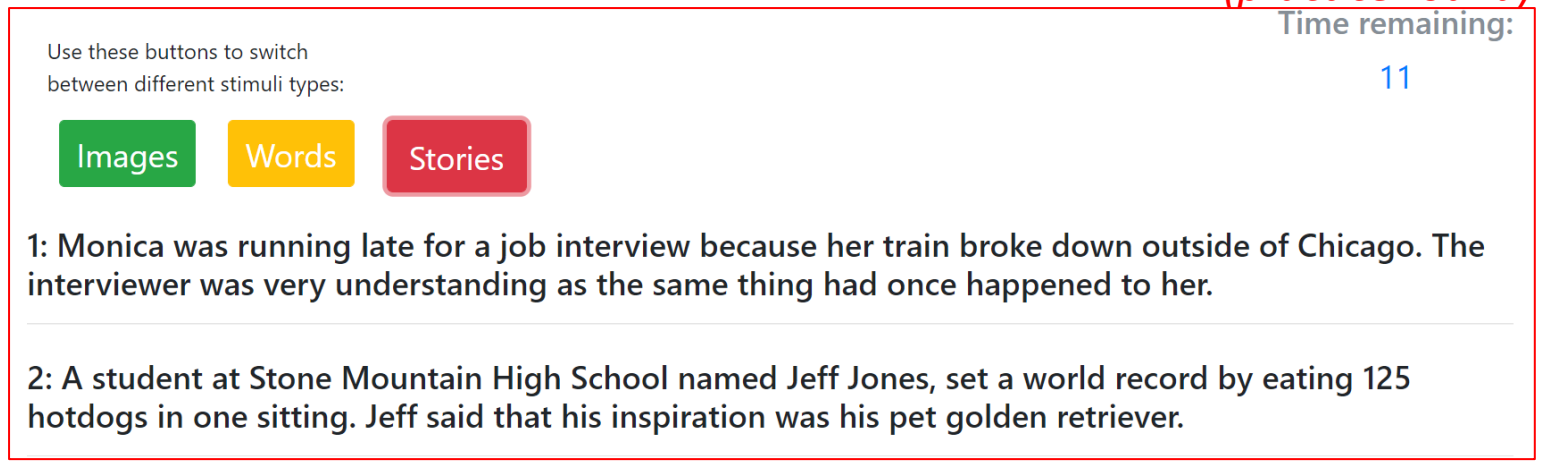
Your 20 seconds will begin when everyone in the group has clicked on a button below.

Images | Words | Stories

Practice

Example stimuli for words (practice round)

Example stimuli for stories (practice round)



Practice

Memory: practice round

Now we will ask you some questions about the stimuli. Remember, this is a practice!

You will answer as a group. When you're answering the questions **everyone should be able to see the Reporter's laptop**.

If you are not the Reporter, leave your laptop open. You'll come back to it shortly.

The practice questions will begin when The Reporter clicks "Next"

Next

Practice: example item

What is the record number of hotdogs eaten in one sitting?

Type [1], [2], or [3]

1) 100
2) 150
3) 125

Now for the actual task. **Everyone should go back to their own laptop**.

Your group will have **40** seconds to memorize 6 images, 12 words and 2 short stories. This will be the same as the practice, but you have twice as long to remember twice as many things.

As in the practice, you will use your own laptop to memorize the stimuli. Again, you have the option of looking at multiple types of stimuli (e.g. stories AND images). Or, you can divide the responsibilities of memorizing different things.

Take some time to discuss how you will approach this task.

You will receive some final instructions when each group member has clicked "Next".

Next

You will have **40** seconds to memorize everything as a group. There is a timer in the top right of the screen.

Remember, during the 40 seconds, you can always change the stimuli you are memorizing by clicking on a different button.

You're NOT allowed to write anything down.

The time starts when everyone has clicked on one of the buttons.

Images | Words | Stories

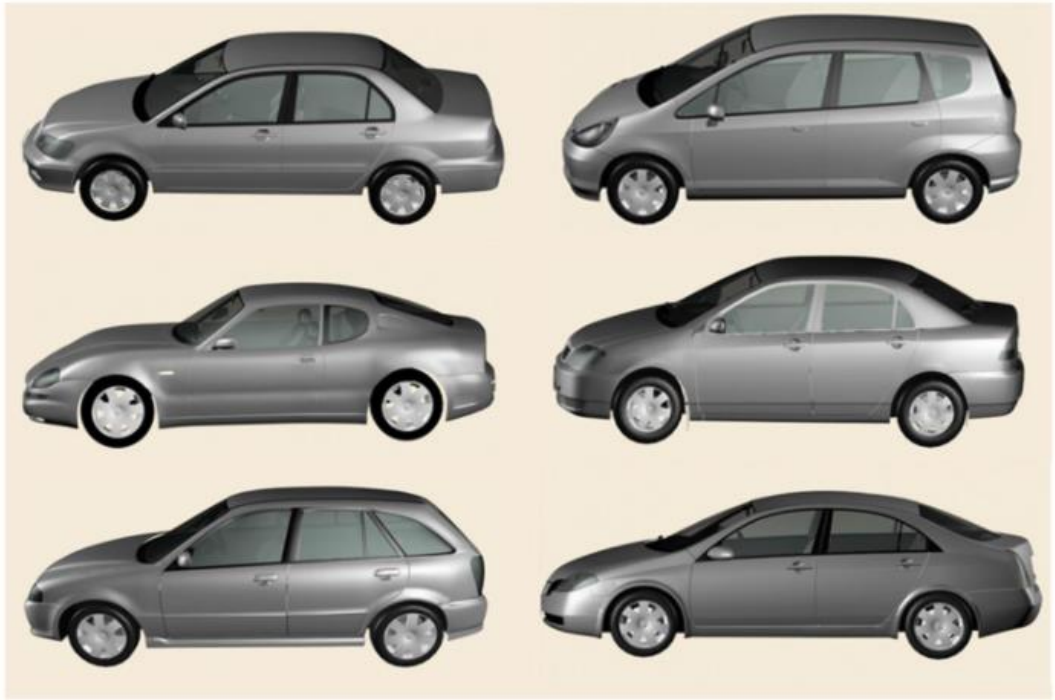
Images stimuli

Time remaining:

38

Use these buttons to switch
between different stimuli types:

Images Words Stories



Words stimuli

Time remaining:

31

Use these buttons to switch
between different stimuli types:

Images | Words | Stories

pistol

Previous Word | Next Word

Stories stimuli

Time remaining:

19

Use these buttons to switch
between different stimuli types:

Images | Words | Stories

1: A recent survey of supermarket shoppers in Baytown revealed that eight out of ten shopping carts have faulty wheels or are difficult to steer. More than half of people reported having had accidents with their carts. These included collisions with other shoppers and bumping into groceries. Retailers claim that the problem is not with the carts, but that shoppers are not using them carefully.

2: There were violent scenes at Grangers, a London department store, when animal rights protesters invaded the furs section. Two expensive mink jackets were ruined and one leather skirt was ripped. A protester was taken to hospital after a confrontation with police. The manager said that tomorrow, business would be back to normal.

Make sure all your group members can see this screen. We are about to ask questions about the words, stories and images you memorized.
Click "Next" to continue.

Next

Example item (images)

Which of the following images is a "target" image?

Type [1], [2], or [3]

1

2

3

Example item
(Story)

More than half the respondents to the supermarket survey reported what?

Type [1], [2], or [3]

1) Collisions with other shoppers
2) Running into stacks of groceries
3) Having accidents with their carts

Example item
(Words)

Which of the following are target words?

Select all that apply, then click "Next"

fork ☐

pan ☐

knife ☐

Next

Shapes Task

Task 3 of 3

Last is a test of your group's ability to recognize patterns and shapes.

This is very similar to the shapes task you did individually. But, the questions are formatted differently, so we'll start with some examples.

You only need one computer for this task.

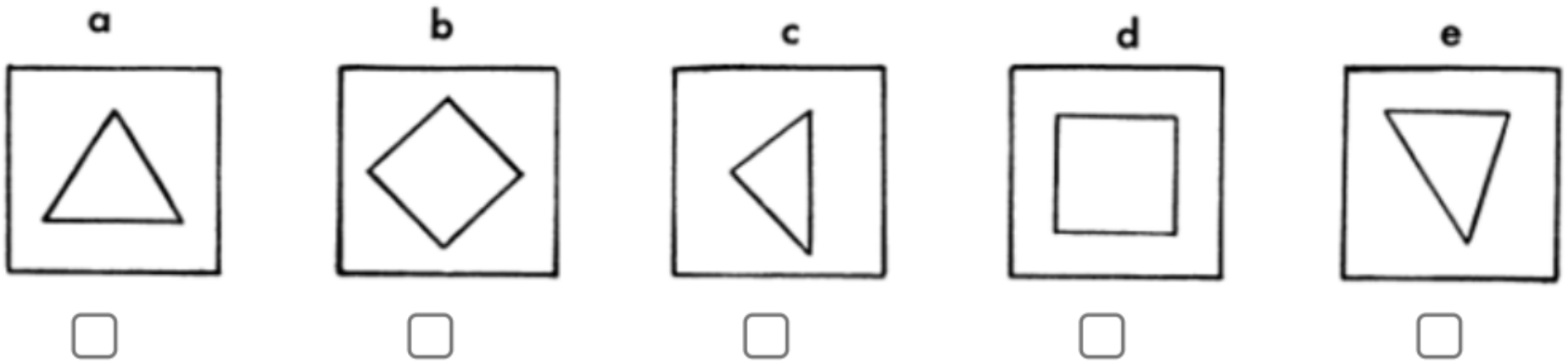
Click Next to see the examples.

Next ⇨

Instructions and examples

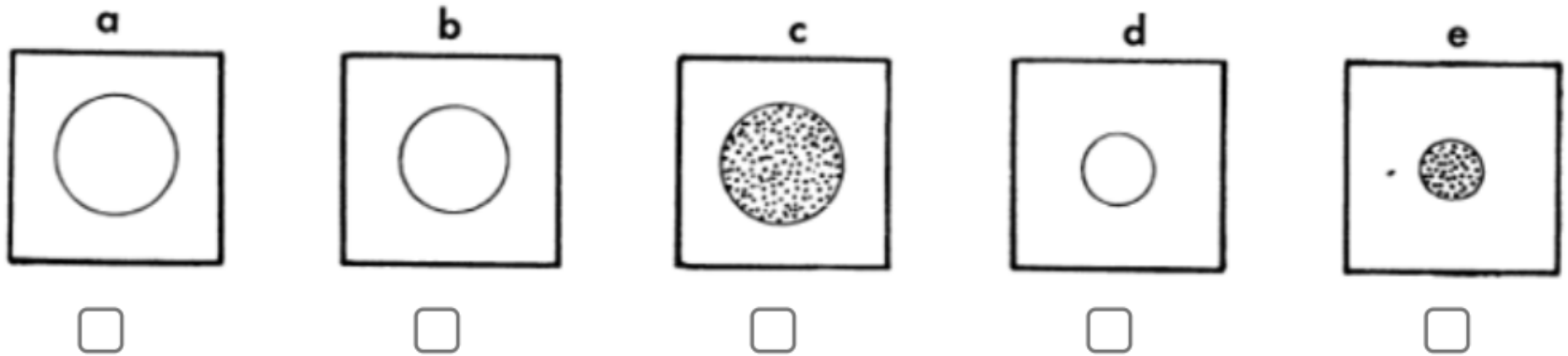
In each question you will see five boxes. Three of the boxes will be alike in some way. The other two are different. Your job is to find the two shapes that don't fit.

Below is an example. You can see that three of the boxes contain triangles (boxes a, c and e). The other two contain rectangles. The correct answer is **b** and **d**. Click on the squares below the boxes to select your answers.



⇦ Back Next ⇨

Here is another example. Two of the circles are filled-in dotted circles (in boxes c and e). The other three circles are empty. The correct answer is c and e. These are the boxes that don't fit with the other three.



When all three of your group members are ready, click "Next".

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After clicking the "next" button, your group will complete the rest yourselves. Remember: **choose two figures in each row that are *different* from the others**.

As always, take a moment to discuss how you will approach this task.

There are 14 questions and you have 4 minutes. You may not have time to finish all the questions, but you should work as quickly and carefully as you can. There will be a timer in the top right of your screen.

You may change your answers if you change your mind, but not after the 4 minutes is up.

Click "Next" to begin!

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Example item

03:57

Please select **two** boxes

a

b

c

d

e

Next ⇨

1 / 14

Your group has completed all of its tasks!
Please return to the waiting room.

Group Tasks: Phase 2
(Validation Task)
Battery E

Welcome to your last task for today!

You will be working together for about 25 minutes trying to solve a task you haven't seen before.

Click "Next" to continue.

Next

Cryptography Task

Welcome to the Cryptography task, in which every letter from A to J has a numerical value. Your goal is to find out the value of each letter.

You will only need one laptop for this task.

At this point everyone should gather around The Reporter's laptop. If you are not The Reporter, you can click "finish".

Once all three members of the group can see the screen of The Reporter's laptop, hit next.

Next ⇨

Cryptography Task

Instructions

The goal of the task is to find the value of each letter using as few "trials" as possible. A trial has three steps.

The first step is to enter an equation: this is a combination of letters with + and - (you can't multiply or divide). To make things clear, imagine the letters had the following values:

A = 1; B = 5; C = 3; D = 9; E = 6; F = 8; G = 4; H = 2; I = 7; J = 0

If we entered the equation D - E, the computer would tell us D - E = C (as 9 - 6 = 3). As another example, you might enter DD + E. The computer would say DD + E = AJB (99 + 6 = 105).

Practice entering an equation, then click "Submit Practice Equation". Once you're done practicing, click "Next".

Submit Practice Equation

A+B = E

Now, try entering another equation. Once you're done practicing, click "Next".

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Second you can make a HYPOTHESIS. This is the part of each "trial" where you can get feedback from the computer about one letter. For example, you might hypothesize that C = 3. Recall again our example values:

A = 1; B = 5; C = 3; D = 9; E = 6; F = 8; G = 4; H = 2; I = 7; J = 0

So, if your hypothesis were C = 3, the computer would tell you "TRUE".
If you had hypothesized that C = 7 then, in this case, the computer would say "FALSE".

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Third, and last, at the end of each trial, your group can guess the letter values. Your group can guess as many letters as you like. If you enter a guess for every letter AND all your guesses are correct, the computer will let you know that you have completed the task! If you choose not to enter a guess for some letters (or if any of your guesses were incorrect) you won't get any feedback: we'll just move straight on to the next trial.

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To review:

Each trial has three elements:

1. Enter an equation (e.g. AA + H) The computer will then tell you the answer.
2. Make a hypothesis (e.g. A = 1) Here, you get feedback about one letter.
3. Guess the letter values. This is where you keep track of the letter values, and submit your guesses. If you guess all the letters correctly, then you have solved the puzzle!

Remember, your goal is to solve the whole puzzle **in the minimum number of trials.**
Your group has a total of 10 minutes, and 15 trials. If you don't solve the task, you will get some points for each letter-number combination you correctly identify.

No calculators are allowed.
Take a few moments to discuss how you'll approach the task.
The puzzle will begin when you hit "Next".

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Screenshot from a group who were on the "equation" step of their 6th "trial"

Cryptography Task

06:29

Trial 6 of 15

Your guess of the full mapping was incorrect.

Enter an equation

Enter the left-hand side of an equation, using letters, addition and subtraction: e.g. "A+B". Please only use the letters A-J plus '+' and '-'.

E+E

Submit

Review Instructions

Equations

A+B+C = DH

A+A+A = A

D+D = G

D+B = E

B+B = DF

Hypotheses

B = 2 is false

A = 0 is true

G = 2 is true

E = 3 is false

F = 6 is true

Current Guesses

A = 0

B = ---

C = ---

D = ---

E = ---

F = 6

G = 2

H = ---

I = ---

J = ---

Screenshot from a group who were on the "hypothesis" step of their 6th "trial"

Cryptography Task

05:59

Trial 6 of 15

Make a hypothesis

Hypothesize the value of a single letter (e.g. F = 7)

B = 8

Submit

Review Instructions

Equations

A+B+C = DH

A+A+A = A

D+D = G

D+B = E

B+B = DF

E+E = DB

Hypotheses

B = 2 is false

A = 0 is true

G = 2 is true

E = 3 is false

F = 6 is true

Current Guesses

A = 0

B = ---

C = ---

D = ---

E = ---

F = 6

G = 2

H = ---

I = ---

J = ---

Screenshot from a group who were on the "guess the letter values" step of their 6th "trial"

Cryptography Task

05:36

Trial 6 of 15

Guess the letter values

Guess as many letter values as you want, then click submit to start the next trial.

A = 0 B = 8 C = -- D = --

E = -- F = 6 G = 2 H = --

I = -- J = --

Submit

Review Instructions

Equations

A+B+C = DH

A+A+A = A

D+D = G

D+B = E

B+B = DF

E+E = DB

Hypotheses

B = 2 is false

A = 0 is true

G = 2 is true

E = 3 is false

F = 6 is true

B = 8 is true

Current Guesses

A = 0

B = ---

C = ---

D = ---

E = ---

F = 6

G = 2

H = ---

I = ---

J = ---

"Review instructions"