

Study S2a

2(intact streak or no streak) between subjects conditions

Instructions:

In this study, you will test out an app by playing word and/or number games, then answering some questions about your experience. **You do not need to get the game correct to continue; just try your best.**

In order to participate in this study, you must be using **Chrome** or **Firefox** on a **computer**. Otherwise, the game may not load properly.

In the next few pages, we will explain how to play the games. Then, you will be able to start!

Page Break

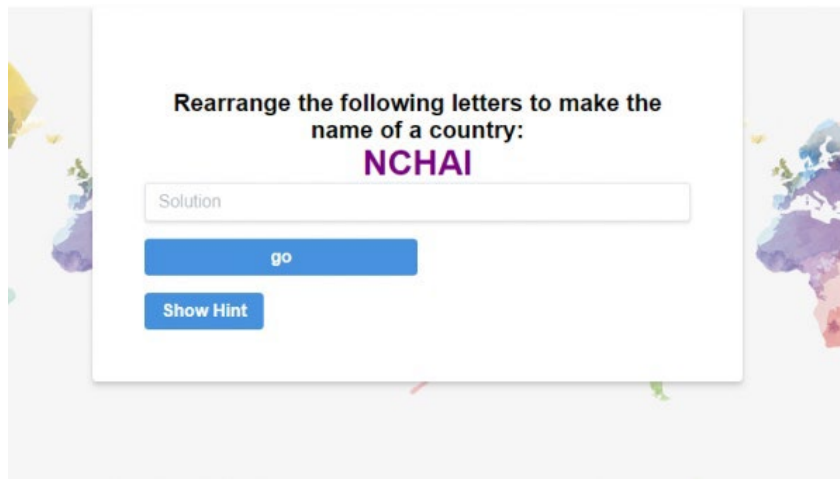
You will be testing out one or two different games today.

One game you may play is **WORD JUMBLE**, a game where you have to unscramble a series of letters to create a word.

Another game you may play is **NUMBER SUMS**, a game where you have to find the two numbers in a box that add up to a given total.

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Below is an example screenshot from WORD JUMBLE:

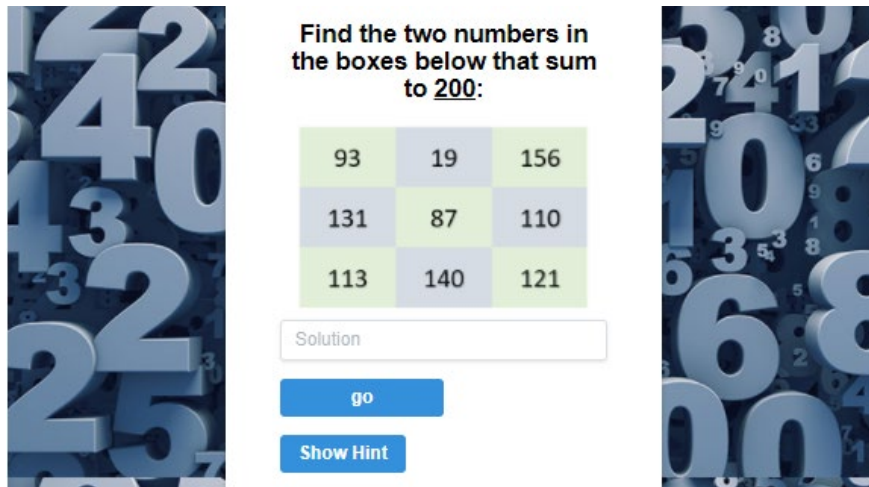


To complete the jumble, you would put your answer (CHINA) into the 'solution' textbox and hit 'go.'

If you get stuck, you can click 'Show Hint' to see what letter the word starts with!

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Below is an example screenshot from NUMBER SUMS:



93	19	156
131	87	110
113	140	121

To solve the sum, you would put your answer ($87 + 113$) into the 'solution' textbox and hit 'go.'

If you get stuck, you can click 'Show Hint' to see what columns or rows the numbers are located in!

You've been assigned to start with NUMBER SUMS!

Sums will be counted towards your **game tracker** as long as you have seen them; in other words, **they count even if you don't answer the sum correctly.**

For example, once you attempt one sum, your game tracker will look like this:

Sums attempted: 1



Only sums (and not jumbles) will be counted towards your game tracker.

The following questions are to make sure you understand how the game works. Please answer if the statements are true or false.

Below is an example game tracker:

Sums attempted: 1



If you answer a sum **incorrectly**, it still is added to your game tracker.

- ☐ True (1)
- ☐ False (2)

If you answer a jumble from the word jumble game, it will be added to your game tracker.

- ☐ True (1)
- ☐ False (2)

Your first game will be a number sums game, but you may also play **word jumble** games.

- ☐ True (1)
- ☐ False (2)

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Stimuli:

Sums attempted: 0

Find the two numbers in the boxes below that sum to 200:

45	3	33
10	91	155
170	88	127


Solution

go

Show Hint

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Sums attempted: 1



The answer was **45 and 155**.

Press the arrow to go on to the next game!

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The intact streak condition completed the following two games, while the no streak condition did not:

Sums attempted: 1

✓

Find the two numbers in the boxes below that sum to 200:

186	80	120
102	17	98
28	114	8

Solution

go

Show Hint

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Sums attempted: 2

✓ ✓

The answer was **102 and 98**.

Press the arrow to go on to the next game!

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Sums attempted: 2



Find the two numbers in the boxes below that sum to 200:

18	80	135
10	99	140
128	72	191

go

Show Hint

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Sums attempted: 3



The answer was **128 and 72**.

Press the arrow to go on to the next game!

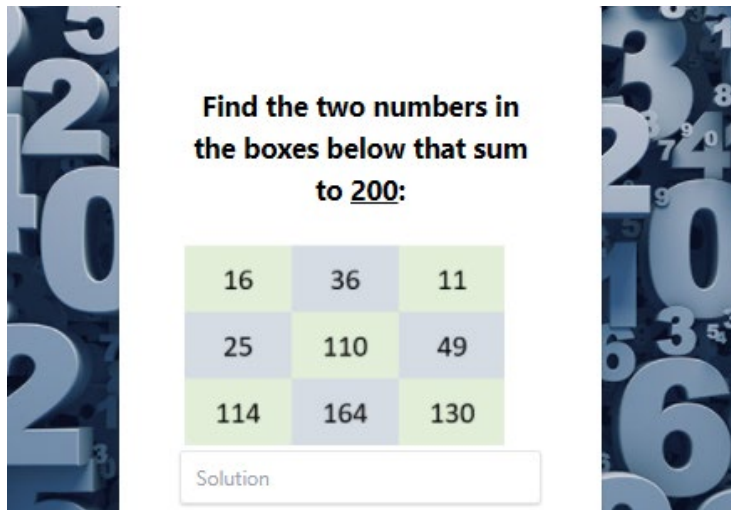
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At the end of the study, based on DV choice:

Display This Question:

If DV2 = same



Find the two numbers in the boxes below that sum to 200:

16	36	11
25	110	49
114	164	130

Solution

Display This Question:

If DV2 = different



Rearrange the following letters to make the name of an animal:

GELAE

Solution

go

Show Hint

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The answer was **36 and 164 / Eagle**.
You've finished all available games!

Main Questions:

Main DV:

Note that at the top of the screen for the Main DV, participants saw an image of their tracker (which varied by condition).

You can stick with **NUMBER SUMS** or switch to **WORD JUMBLES**.

Please select what you would like to play for your next game:

WORD JUMBLES	NUMBER SUMS
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Directions before measures:

Please answer the following questions about how you felt **after playing your most recent game**.

Sense of accomplishment measures:

How much did you feel that you accomplished something? [1 Not at all, 11 A great deal]

How much did you feel like you had achieved something? [1 Not at all, 11 A great deal]

How proud did you feel? [1 Not at all, 11 A great deal]

How successful did you feel? [1 Extremely unsuccessful, 11 Extremely successful]

How effective did you feel? [1 Extremely ineffective, 11 Extreme effective]

How motivated did you feel to continue completing language learning questions? [1 Not at all, 11 A great deal]

How determined were you to continue completing language learning questions? [1 Not at all, 11 Extremely]

How much did your past behavior push you to stick with completing language learning questions for the rest of this study? [1 Not at all, 11 A great deal]

How much did you feel driven to continue completing language learning questions? [1 Not at all, 11 Extremely]

How much did you feel compelled to continue completing language learning questions? [1 Not at all, 11 Extremely]

Additional questions:

Why did you choose to play NUMBER SUMS/WORD JUMBLE for your last game? [free response]

How much were you aware of your streak of attempting the games? [1 Not at all, 11 Extremely]

Do you have any apps with games like this on your phone, tablet, or computer? [Yes/No]

If Yes

How often do you use apps to play games like this? [1 Almost never, 7 Every day]

Please list the names of these games/apps below. [free response]

Demographics:

What is your gender? [Male (1), Female (2), Prefer not to say (3)]

What is your age? [numeric free response]

Please write any comments or feedback regarding this survey below. [free response]