Free response version

Please make your
web browser full screen.

Press the **N** key to go to the **NEXT** slide.

- This study will have three sessions.
- If you pass this first session with a task accuracy greater than 60%, you will be invited to participate in two additional sessions.
- These two additional sessions will occur on different days.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

In this study, you will be seeing a lot of lines that look like the one above.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Sometimes the line will be rotated clockwise of vertical, as shown here.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Sometimes the line will be rotated

counterclockwise of vertical, as shown here.

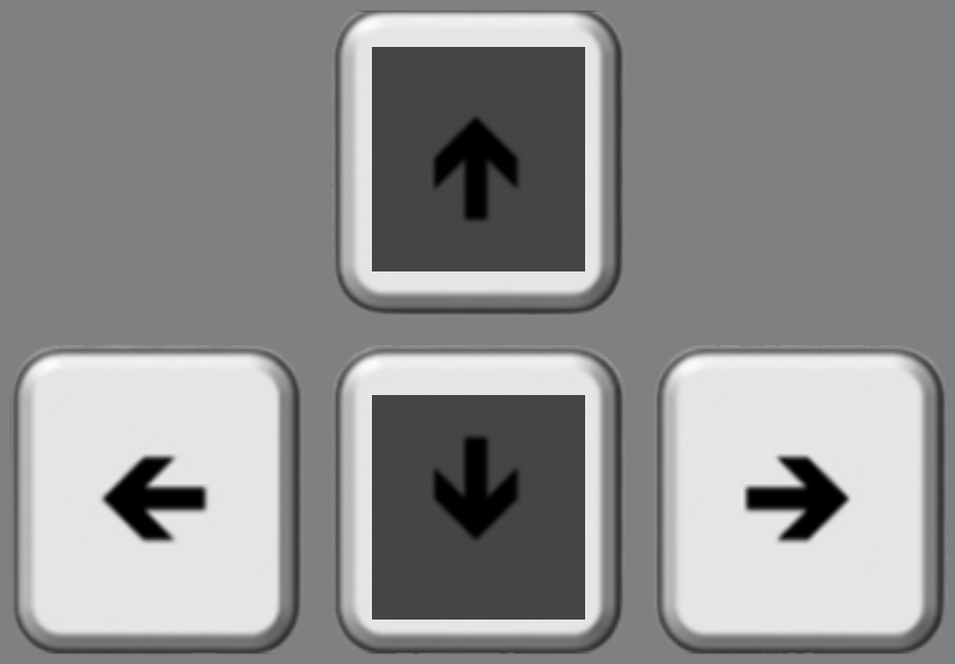
Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

During the study, you will be viewing a number of lines like these and you will be asked to report which direction the lines are tilted.

There are only two possible options: counterclockwise of vertical, like the line above.

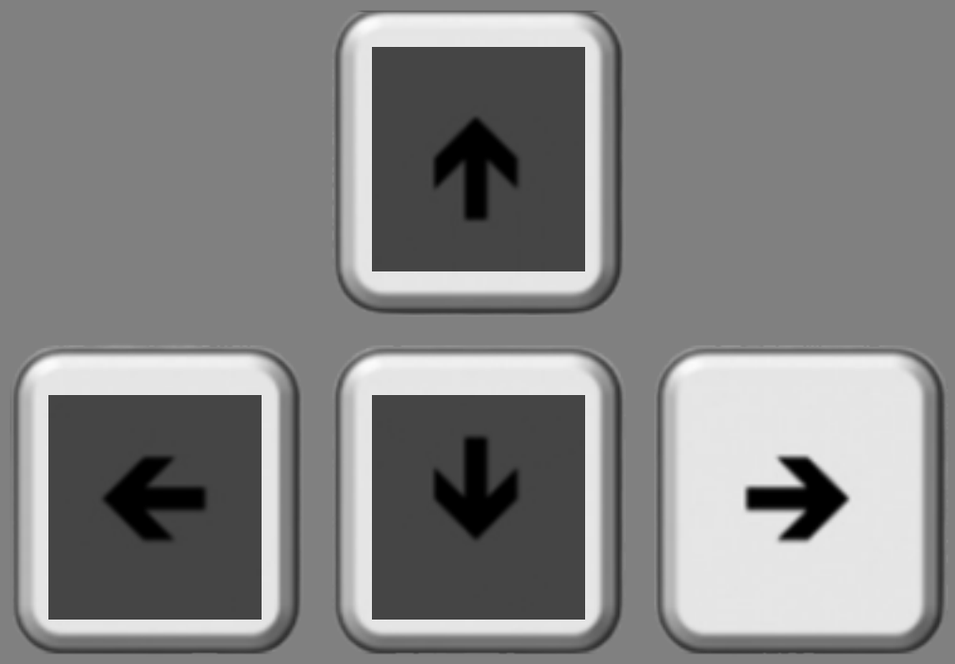
Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Or clockwise of vertical, as shown here.



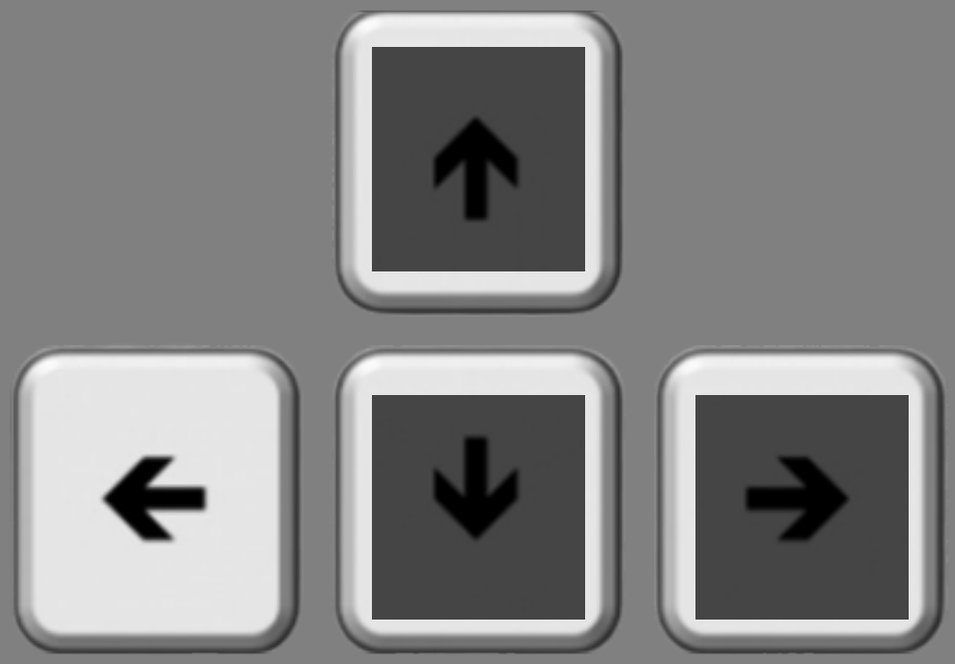
You will make your response using the left and right arrow keys on your computer keyboard.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.



Press the right arrow key if the line is rotated clockwise of vertical.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.



Press the left arrow key if the line is rotated counterclockwise of vertical.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Sometimes, it will be quite difficult, and you will just have to guess.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

So that’s the basic task.

Here’s how it will unfold.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Each trial will start with a blank screen and a fixation point. It's very important to keep your eyes on the fixation point the whole time.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

The color of the fixation point will vary in each trial.

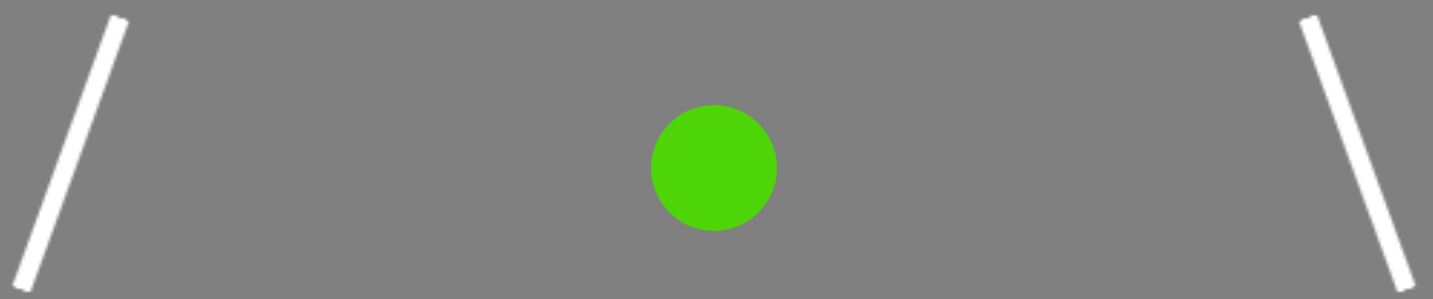
Sometimes it will be red.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Sometimes it will be green. However, the color of the fixation point does not provide any information about where the target line will appear.

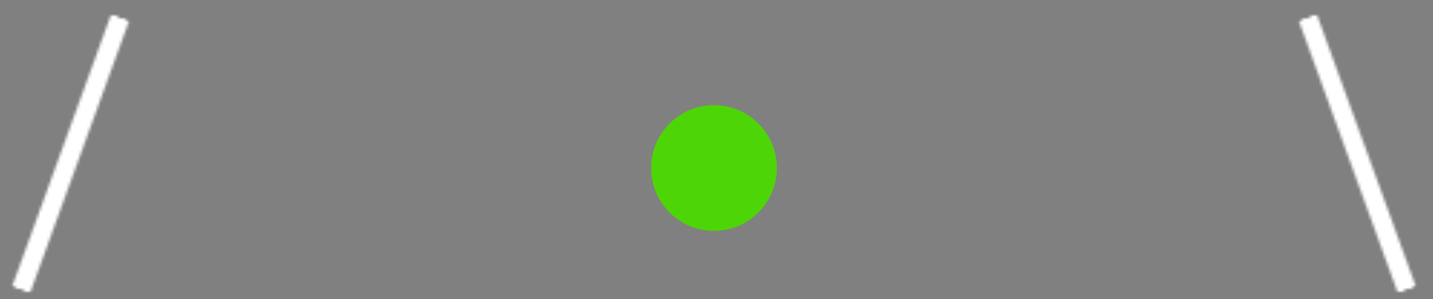
Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

After a short time, two of the lines you just read about will briefly appear. One to the left of the fixation point and one to the right.



Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

You will only have to report the tilt for one of the lines. It could be the one on the left. It could be the one on the right.



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You won’t know which one it will be, so that’s why it is really important to keep your eyes in the center, steady on the fixation point.

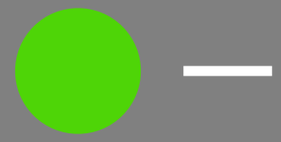
Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

After the lines disappear, a small dash will indicate which one you need to make a decision about.

In this example, the dash is on the right side of the fixation point and it is indicating that you should report the rotation of the line that was on the right.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

You will have 20 seconds to enter your response, but you should respond as quickly and accurately as possible.



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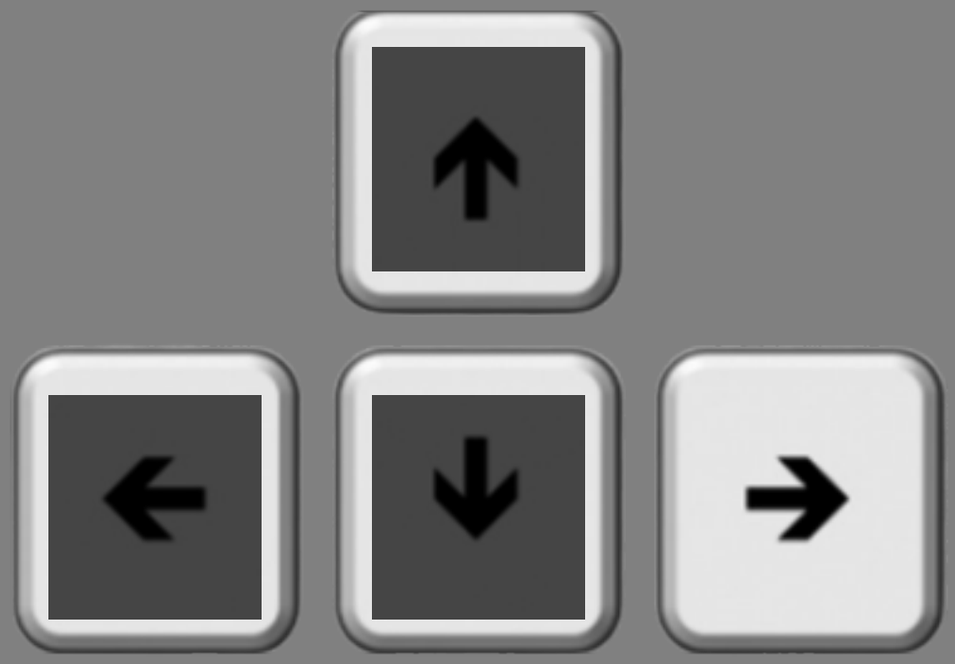
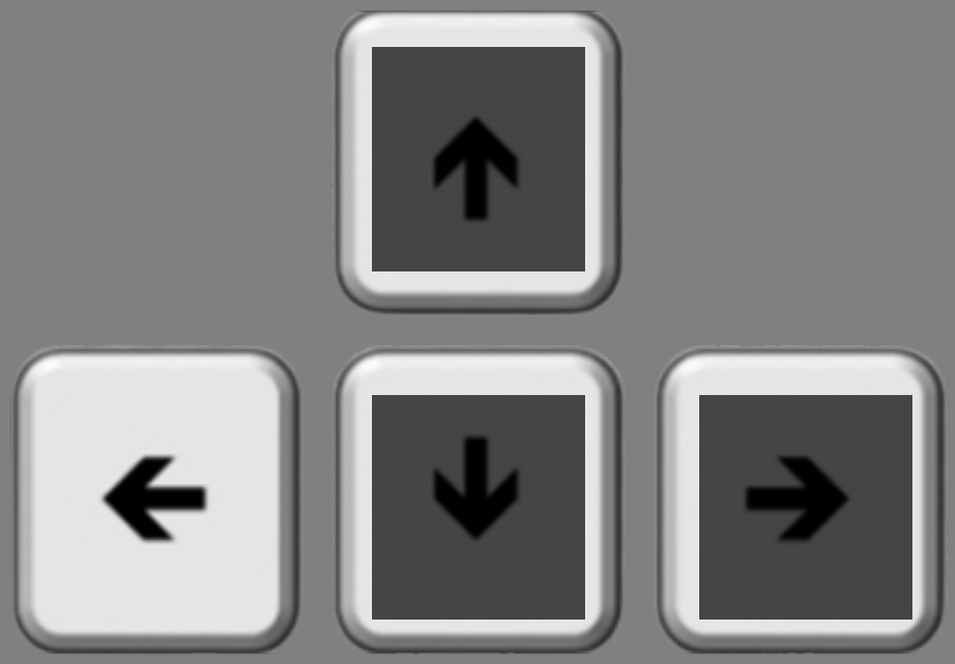


And remember, it's the right arrow key if the line was rotated clockwise of vertical.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.



And it’s the left arrow key if the line was rotated counterclockwise of vertical.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

If you were correct, the fixation point will briefly turn white.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

If you were incorrect, an X will briefly appear.

X

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

If you do not respond within the 20 second window, an X will briefly appear.

X

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

- On some trials, you may notice small dots that flash somewhere on the screen.

- These flashes are irrelevant and will not provide any information about where the target line will appear.

- Do your best to ignore them.

- In total, you will complete 10 experimental blocks.
- Each block contains 96 trials.
- It should take ~4 minutes to complete each block. Feel free to take a short break between the blocks.
- You will start with 16 practice trials.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Thank you for participating!

Press the **F** key to **FINISH**, press the **B** key to go **BACK**.

500 ms response deadline

Please make your
web browser full screen.

Press the **N** key to go to the **NEXT** slide.

- This study may have three sessions.

- If you pass the two criteria listed below, you will be invited to participate in two additional, approximately one-hour sessions (for a total of 3 sessions):
  - Task accuracy in Session 1 must be greater than 60%
  - Number of missed responses in Session 1 must be less than 10%
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- These two additional sessions will occur on different days.

In this study, you will be seeing a lot of lines that look like the one above.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Sometimes the line will be rotated clockwise of vertical, as shown here.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

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counterclockwise of vertical, as shown here.

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During the study, you will be viewing a number of lines like these and you will be asked to report which direction the lines are tilted.

There are only two possible options: counterclockwise of vertical, like the line above.

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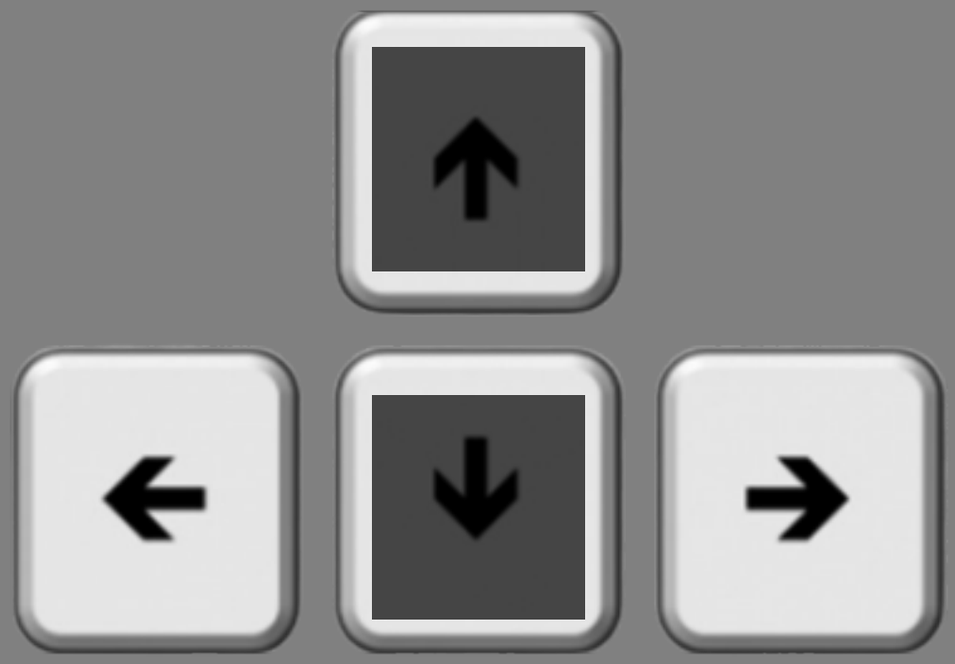

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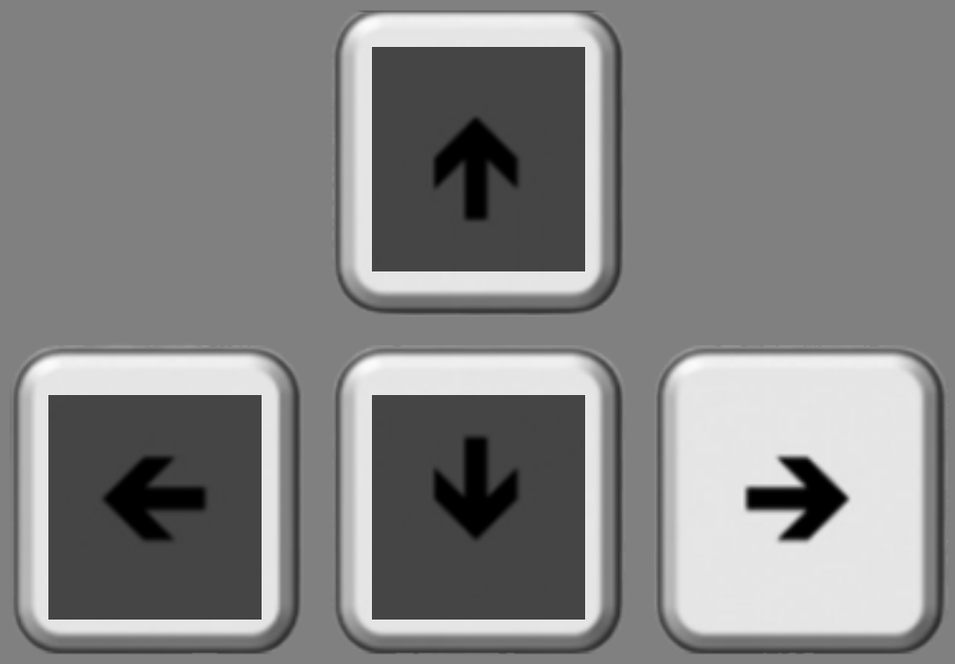

Press the right arrow key if the line is rotated clockwise of vertical.

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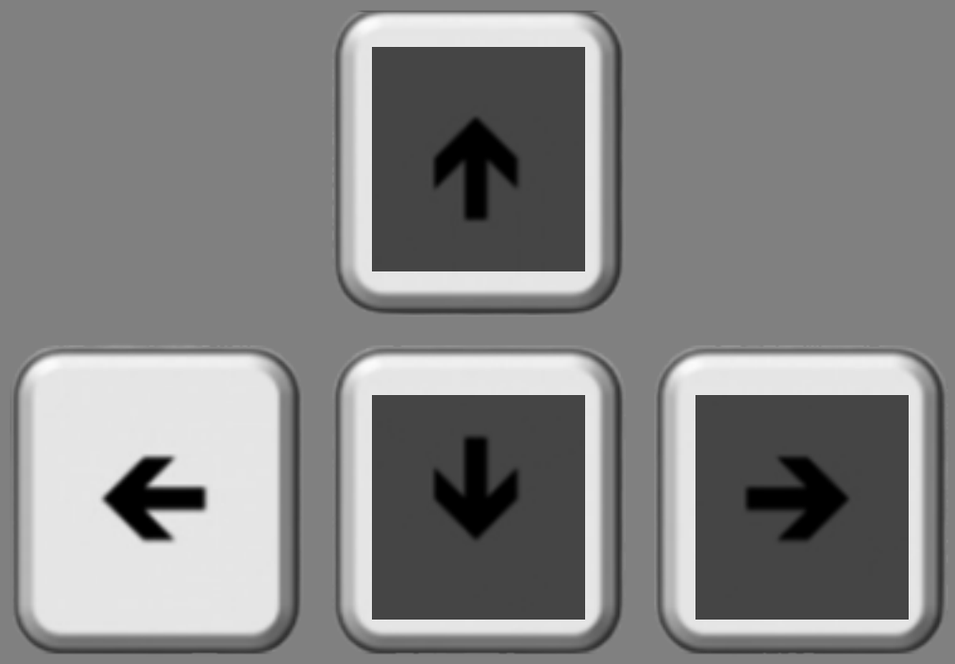

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So that’s the basic task.

Here’s how it will unfold.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Each trial will start with a blank screen and a fixation point. It's very important to keep your eyes on the fixation point the whole time.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

The color of the fixation point will vary in each trial.

Sometimes it will be red.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Sometimes it will be green. However, the color of the fixation point does not provide any information about where the target line will appear.

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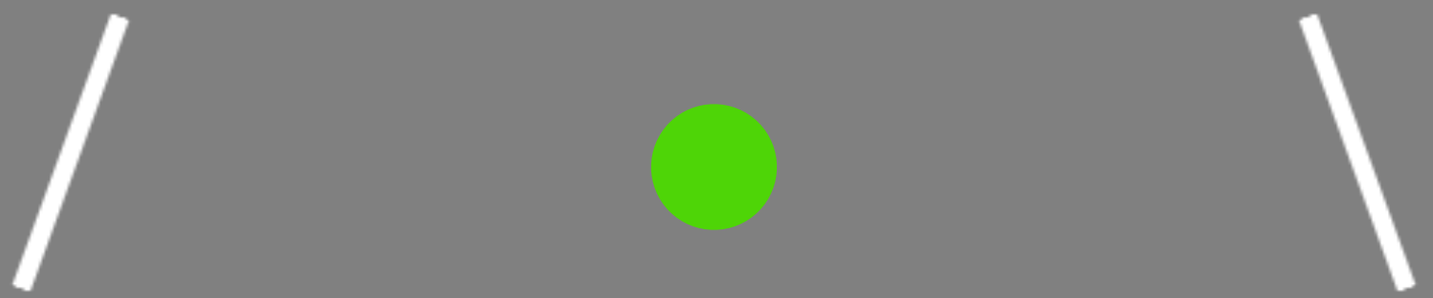
After a short time, two of the lines you just read about will briefly appear. One to the left of the fixation point and one to the right.



Note: the two lines are tilted independently of each other. That means they could be tilted the same way, or opposite ways, equally likely.

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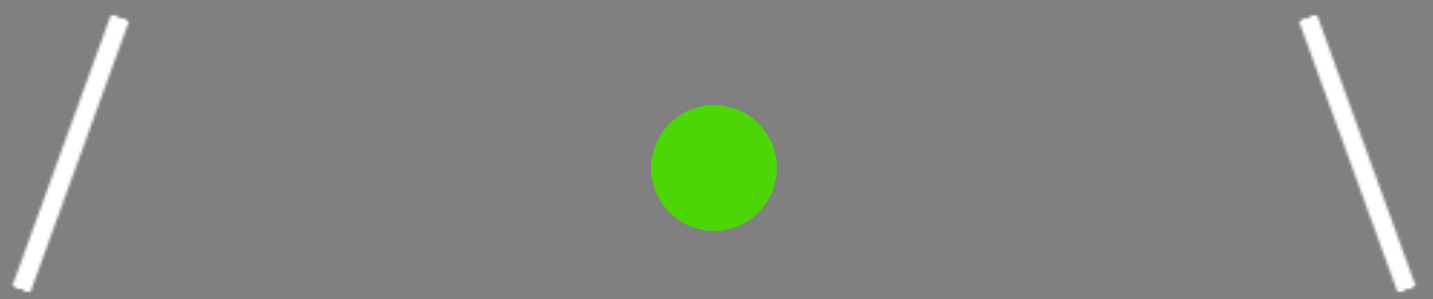

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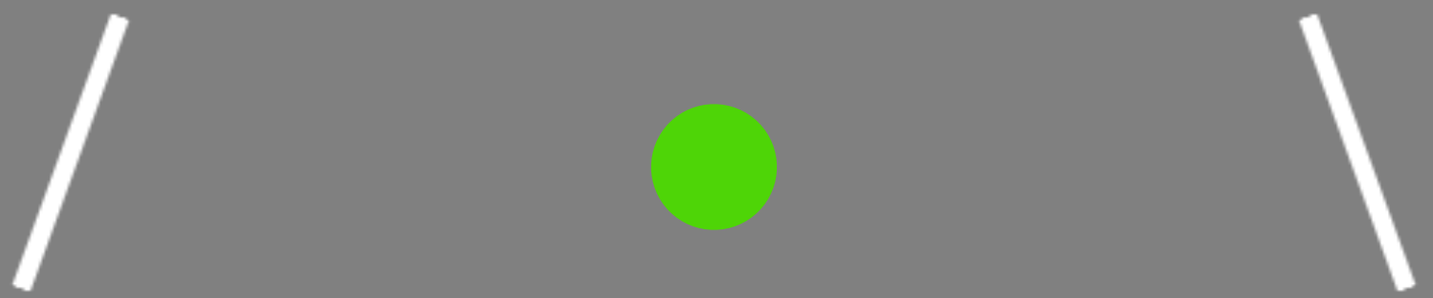

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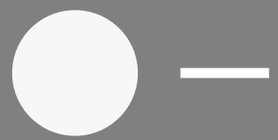

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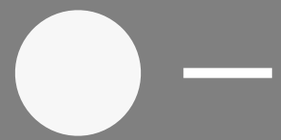
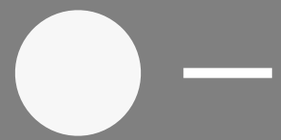


Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Once the fixation color changes to white, you will have 0.5 seconds to enter your response.



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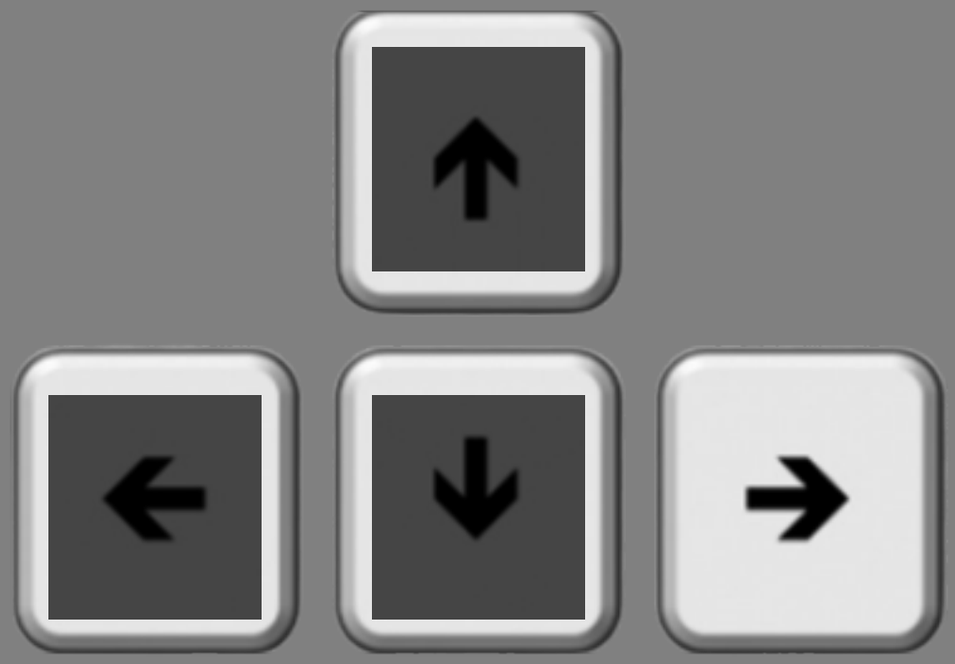

And remember, it's the right arrow key if the line was rotated clockwise of vertical.

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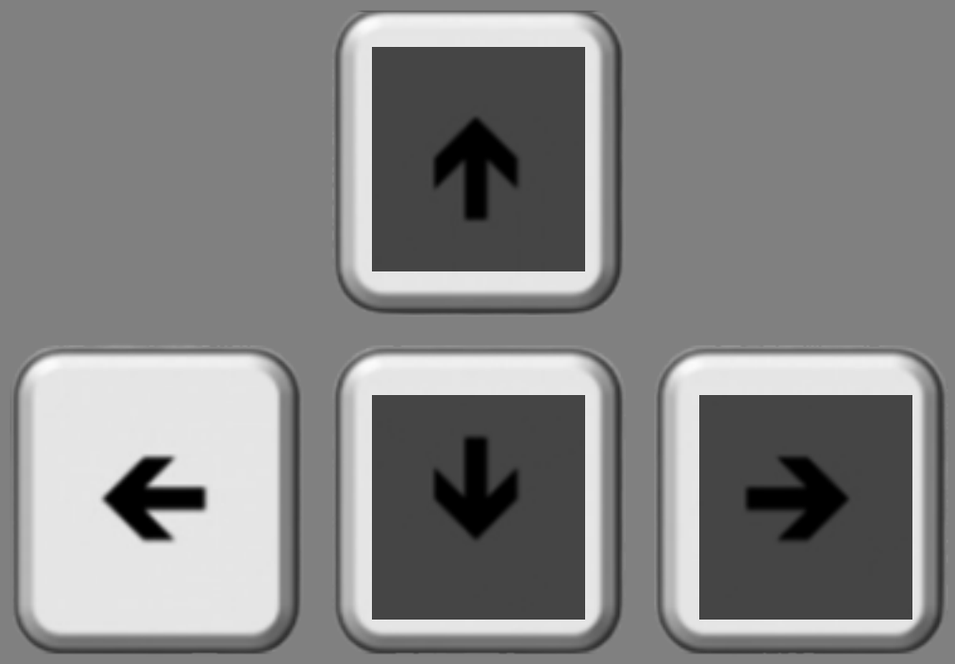


And it’s the left arrow key if the line was rotated counterclockwise of vertical.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

If you were correct, a thumbs up image will briefly appear.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

If you were incorrect, a thumbs down image will briefly appear.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

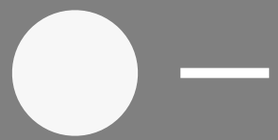
If you do not respond within the 0.5 seconds window, a clock will briefly appear.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

In this experiment, *when* you respond is very important.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

You should respond as accurately as possible, but prioritize getting in your response during the 0.5 second response window.



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As mentioned before, to be eligible for the two additional sessions, the number of missed responses in Session 1 must be less than 10%.

- On some trials, you may notice small dots that flash somewhere on the screen.

- These flashes are irrelevant and will not provide any information about where the target line will appear.

- Do your best to ignore them.

- In total, you will complete 10 experimental blocks.
- Each block contains 96 trials.
- It should take ~5 minutes to complete each block. Feel free to take a short break between the blocks.
- You will start with 16 practice trials.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Thank you for participating!

Press the **F** key to **FINISH**, press the **B** key to go **BACK**.

700 ms response deadline, 3 session version

Please make your
web browser full screen.

Press the **N** key to go to the **NEXT** slide.

- This study may have three sessions.

- If you pass the two criteria listed below, you will be invited to participate in two additional, approximately one-hour sessions (for a total of 3 sessions):
  - Task accuracy in Session 1 must be greater than 60%
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Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

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counterclockwise of vertical, as shown here.

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During the study, you will be viewing a number of lines like these and you will be asked to report which direction the lines are tilted.

There are only two possible options: counterclockwise of vertical, like the line above.

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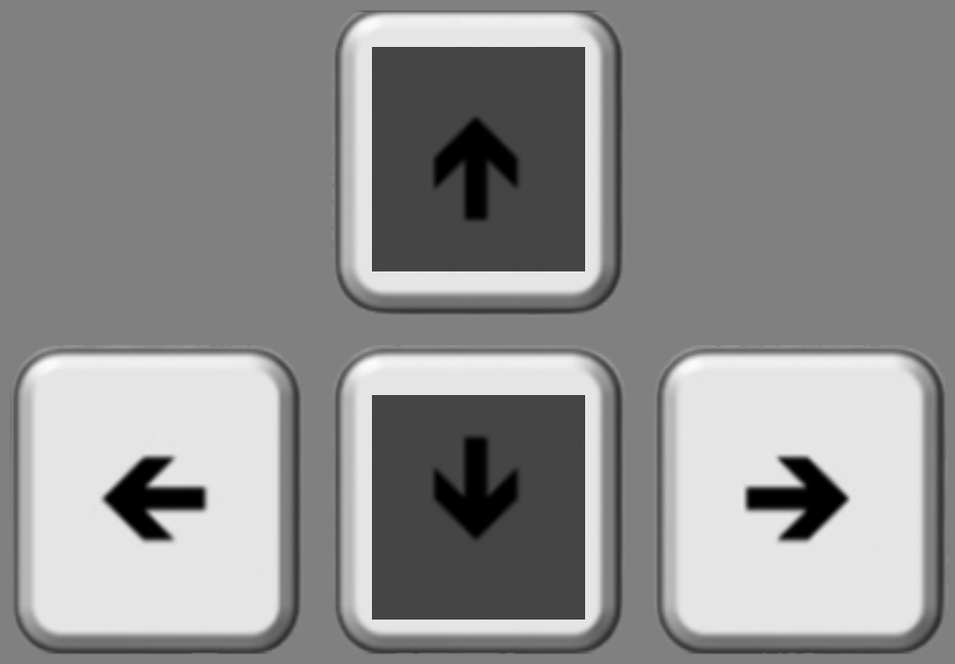
Or clockwise of vertical, as shown here.



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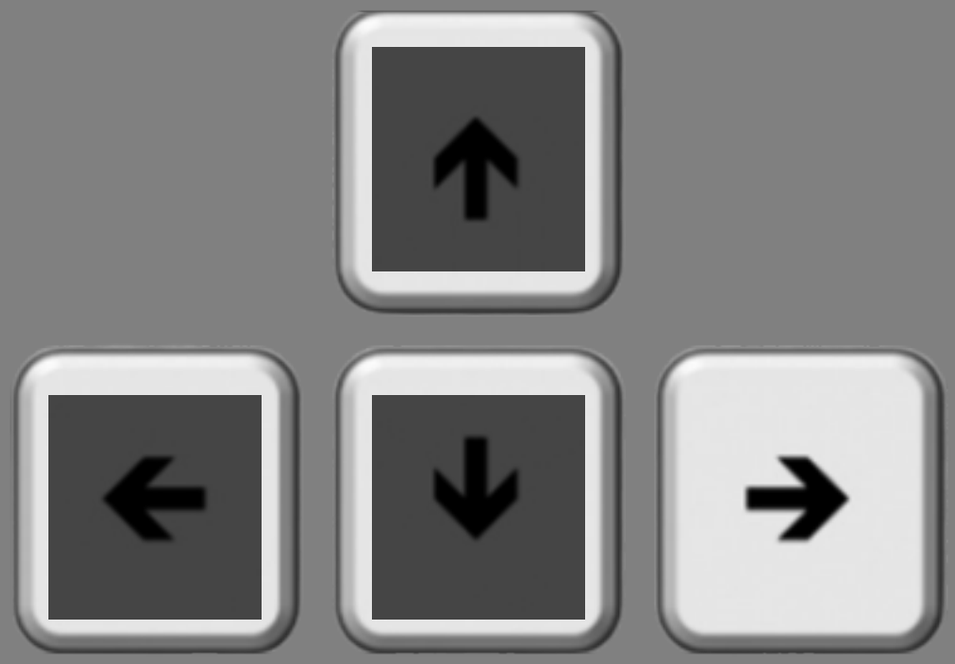

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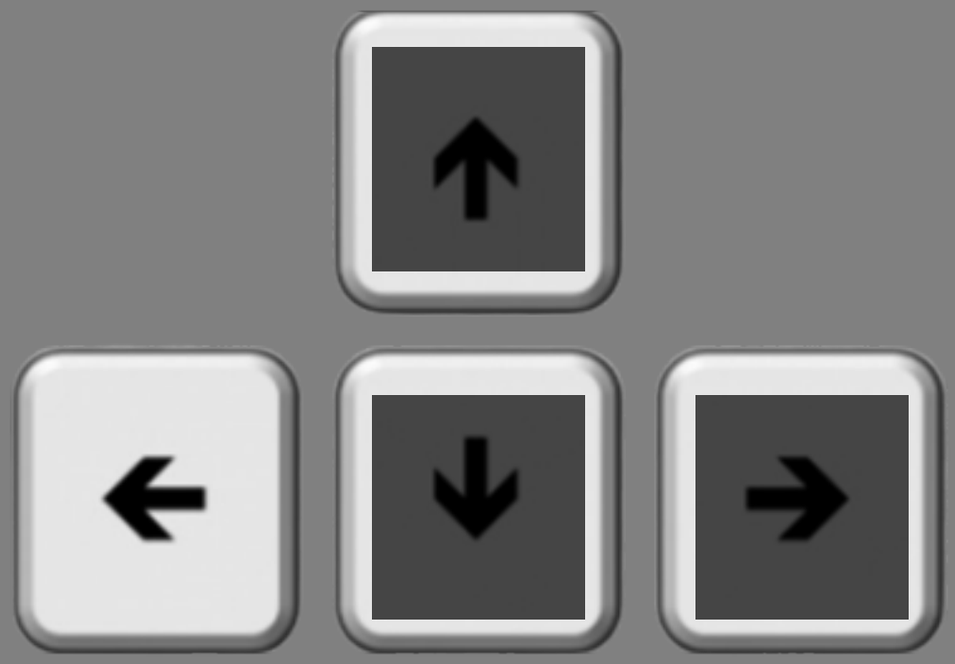

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Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

So that’s the basic task.

Here’s how it will unfold.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Each trial will start with a blank screen and a fixation point. It's very important to keep your eyes on the fixation point the whole time.

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The color of the fixation point will vary in each trial.

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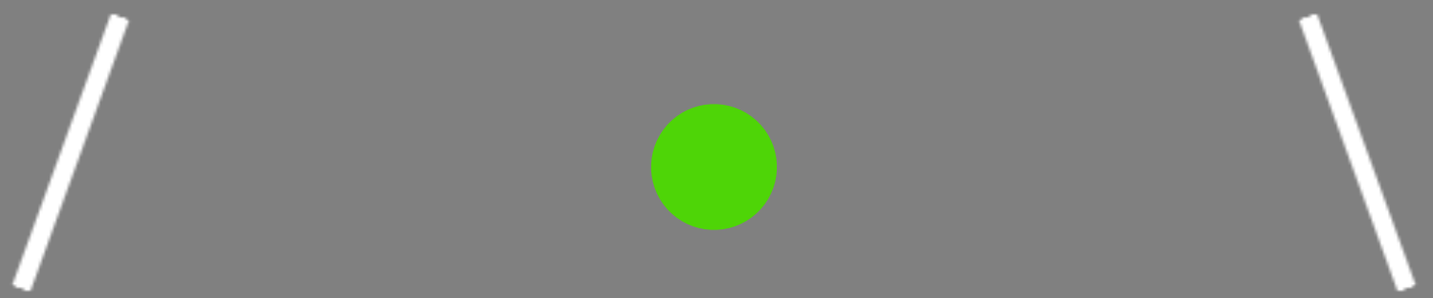

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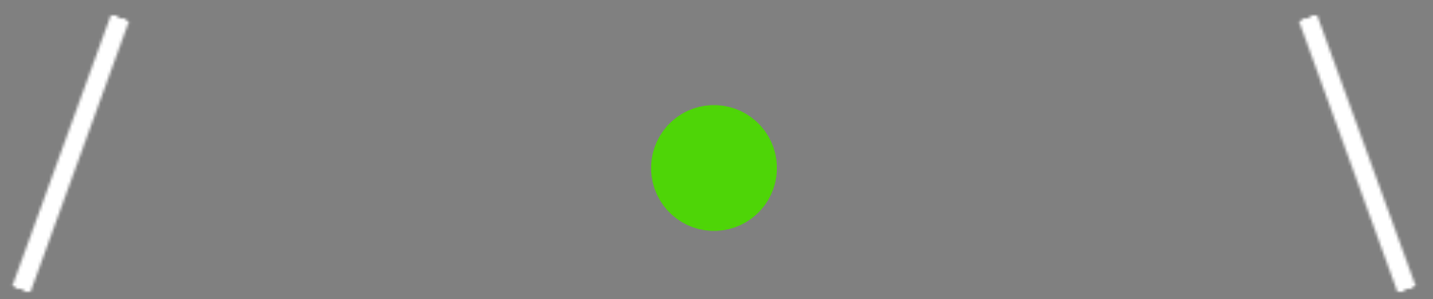

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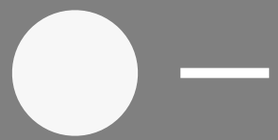

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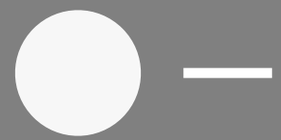

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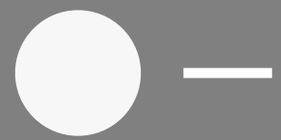
Once the fixation color changes to white, you will have 0.7 seconds to enter your response.



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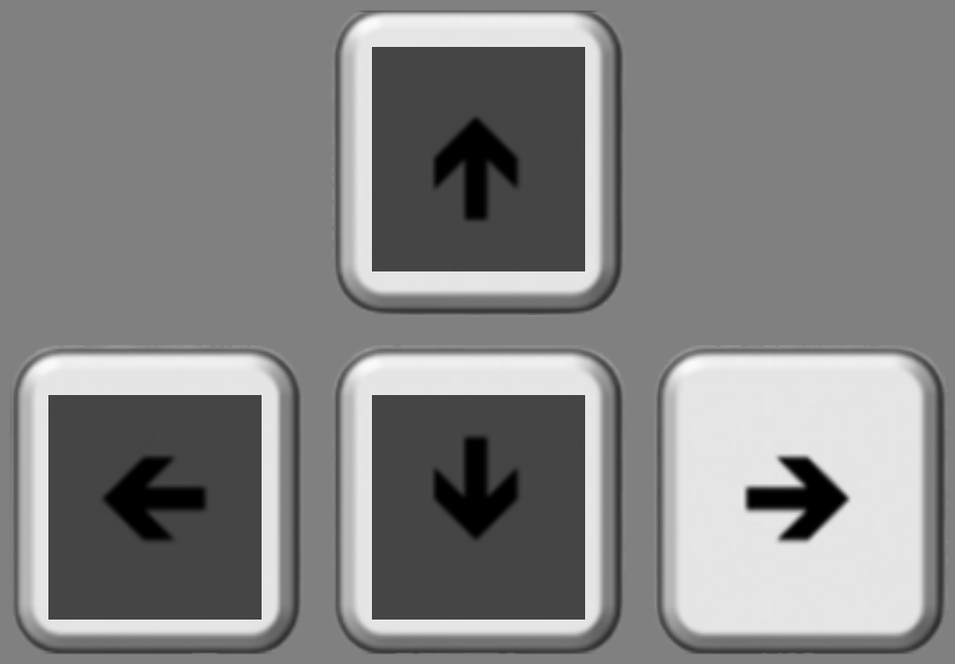

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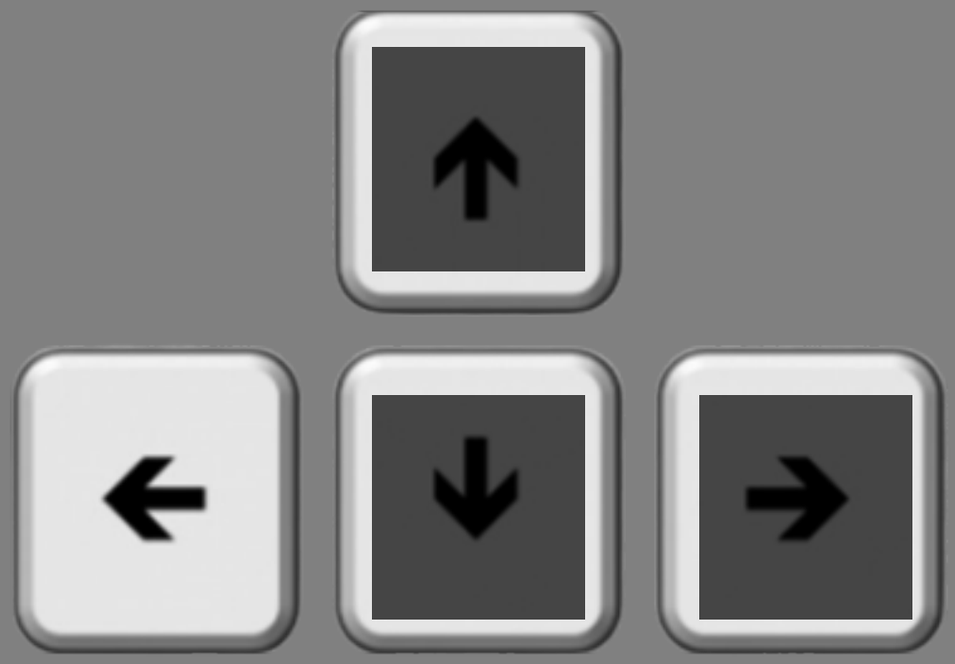


And it’s the left arrow key if the line was rotated counterclockwise of vertical.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

If you were correct, a thumbs up image will briefly appear.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

If you were incorrect, a thumbs down image will briefly appear.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

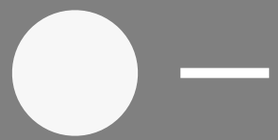
If you do not respond within the 0.7 seconds window, a clock will briefly appear.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

In this experiment, *when* you respond is very important.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

You should respond as accurately as possible, but prioritize getting in your response during the 0.7 second response window.



Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

As mentioned before, to be eligible for the two additional sessions, the number of missed responses in Session 1 must be less than 10%.

- On some trials, you may notice small dots that flash somewhere on the screen.

- These flashes are irrelevant and will not provide any information about where the target line will appear.

- Do your best to ignore them.

- In total, you will complete 10 experimental blocks.
- Each block contains 96 trials.
- It should take ~5 minutes to complete each block. Feel free to take a short break between the blocks.
- You will start with 16 practice trials.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Thank you for participating!

Press the **F** key to **FINISH**, press the **B** key to go **BACK**.

700 ms response deadline, 2 session version

Please make your
web browser full screen.

Press the **N** key to go to the **NEXT** slide.

- This study may have two sessions.

- If you pass the two criteria listed below, you will be invited to participate in one additional, approximately one-hour session (for a total of 2 sessions):
  - Task accuracy in Session 1 must be greater than 60%
  - Number of missed responses in Session 1 must be less than 10%
    - more details about missed responses to come

- This additional session will occur on a different day.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

In this study, you will be seeing a lot of lines that look like the one above.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Sometimes the line will be rotated clockwise of vertical, as shown here.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Sometimes the line will be rotated

counterclockwise of vertical, as shown here.

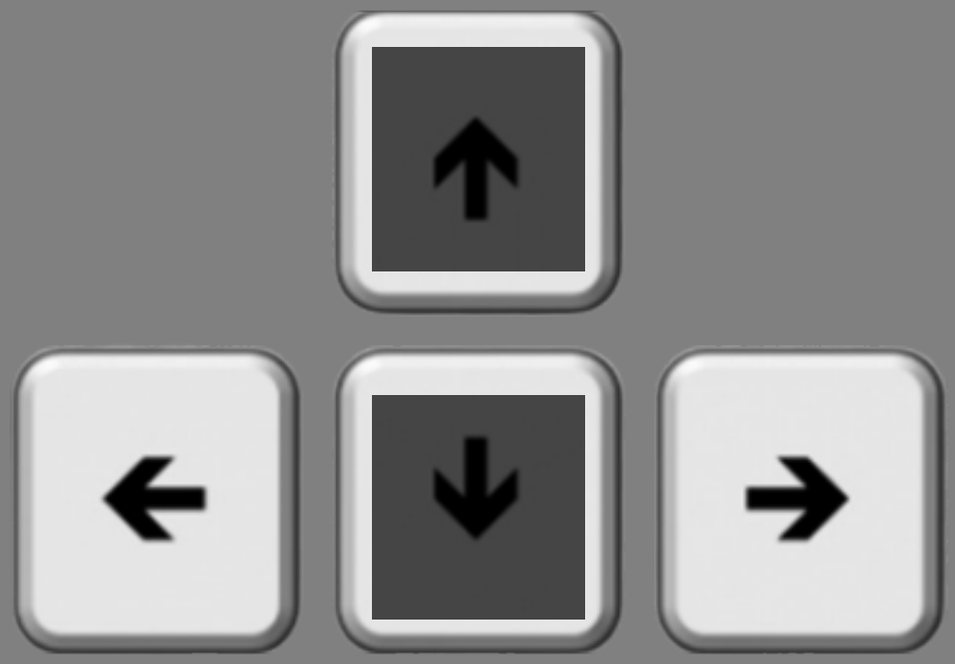
Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

During the study, you will be viewing a number of lines like these and you will be asked to report which direction the lines are tilted.

There are only two possible options: counterclockwise of vertical, like the line above.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Or clockwise of vertical, as shown here.



You will make your response using the left and right arrow keys on your computer keyboard.

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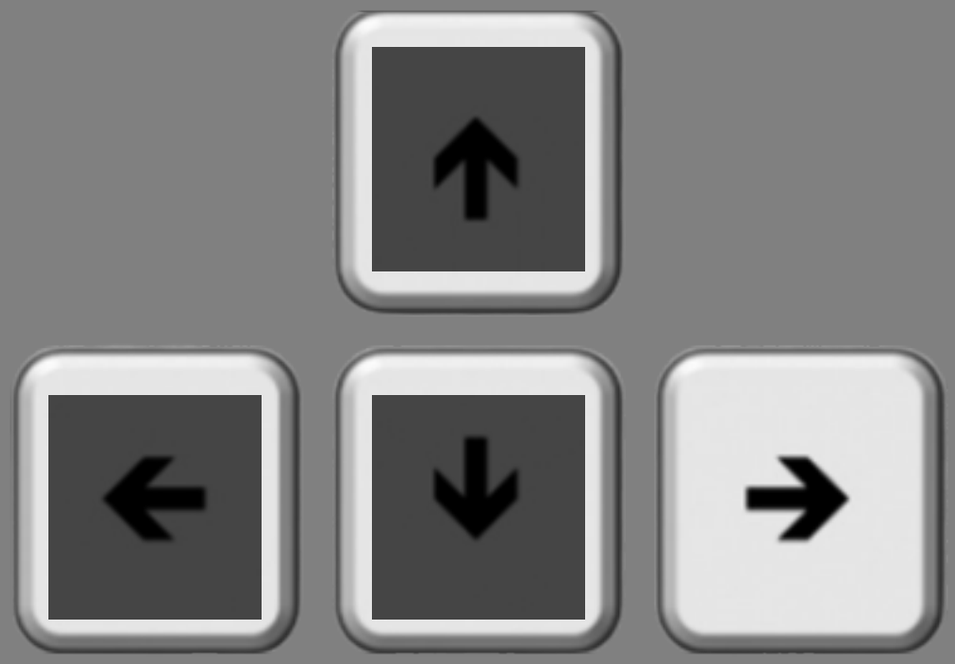
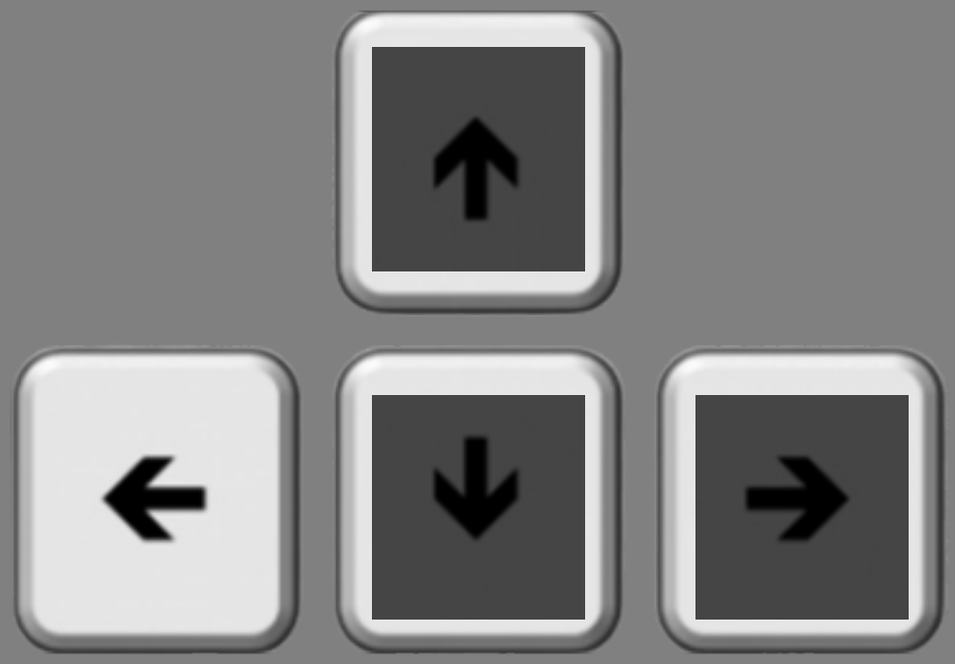


Press the right arrow key if the line is rotated clockwise of vertical.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.



Press the left arrow key if the line is rotated counterclockwise of vertical.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Sometimes, it will be quite difficult, and you will just have to guess.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

So that’s the basic task.

Here’s how it will unfold.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Each trial will start with a blank screen and a fixation point. It's very important to keep your eyes on the fixation point the whole time.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

The color of the fixation point will vary in each trial.

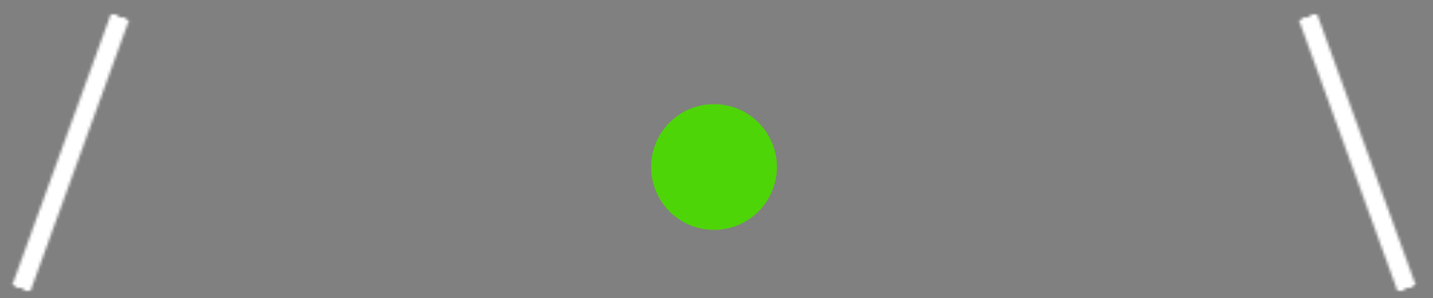
Sometimes it will be red.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Sometimes it will be green. However, the color of the fixation point does not provide any information about where the target line will appear.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

After a short time, two of the lines you just read about will briefly appear. One to the left of the fixation point and one to the right.



Note: the two lines are tilted independently of each other. That means they could be tilted the same way, or opposite ways, equally likely.

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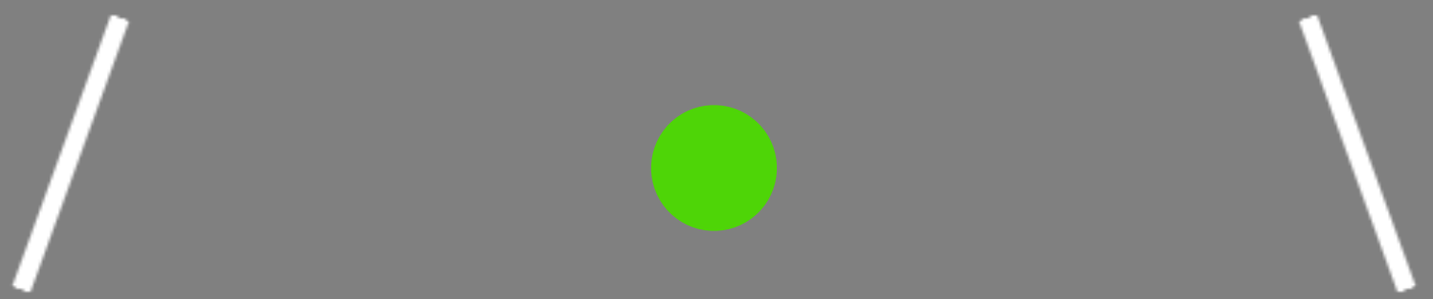
You will only have to report the tilt for one of the lines. It could be the one on the left. It could be the one on the right.



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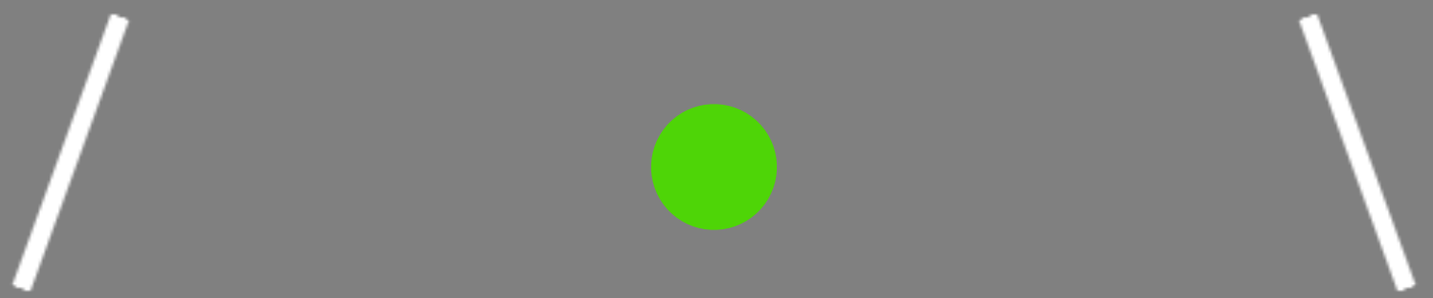
You won’t know which one it will be, so that’s why it is really important to keep your eyes in the center, steady on the fixation point.



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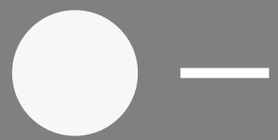
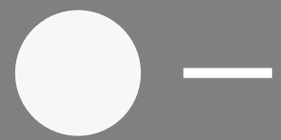


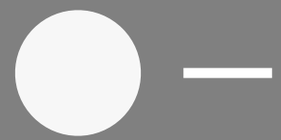
Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

In this example, the dash is on the right side of the fixation point and it is indicating that you should report the rotation of the line that was on the right.



Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Once the fixation color changes to white, you will have 0.7 seconds to enter your response.



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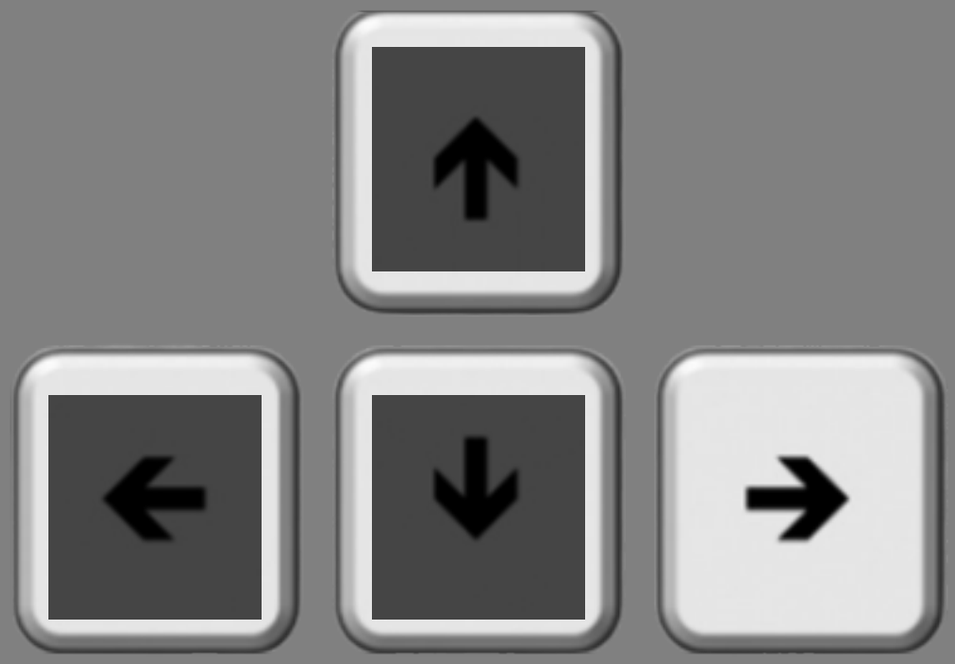
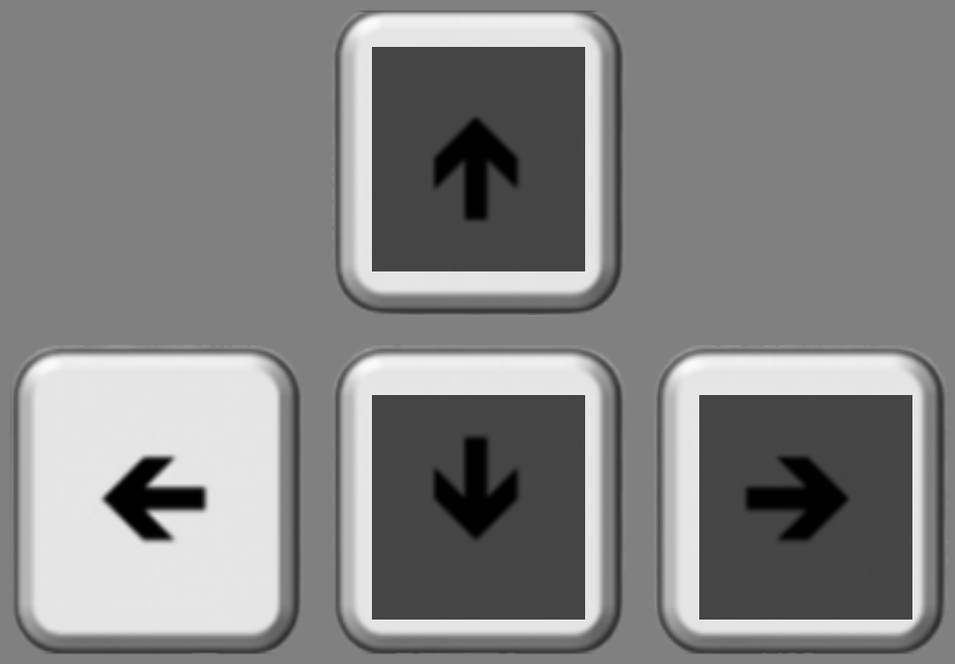


And remember, it's the right arrow key if the line was rotated clockwise of vertical.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.



And it’s the left arrow key if the line was rotated counterclockwise of vertical.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

If you were correct, a thumbs up image will briefly appear.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

If you were incorrect, a thumbs down image will briefly appear.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

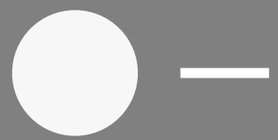
If you do not respond within the 0.7 seconds window, a clock will briefly appear.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

In this experiment, *when* you respond is very important.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

You should respond as accurately as possible, but prioritize getting in your response during the 0.7 second response window.



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As mentioned before, to be eligible for the additional session, the number of missed responses in Session 1 must be less than 10%.

- On some trials, you may notice small dots that flash somewhere on the screen.

- These flashes are irrelevant and will not provide any information about where the target line will appear.

- Do your best to ignore them.

- In total, you will complete 10 experimental blocks.
- Each block contains 96 trials.
- It should take ~5 minutes to complete each block. Feel free to take a short break between the blocks.
- You will start with 16 practice trials.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Thank you for participating!

Press the **F** key to **FINISH**, press the **B** key to go **BACK**.

1067 ms response delay, unenforced version

Please make your
web browser full screen.

Press the **N** key to go to the **NEXT** slide.

- This study will have three sessions.
- If you pass this first session with a task accuracy greater than 60%, you will be invited to participate in two additional sessions.
- These two additional sessions will occur on different days.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

In this study, you will be seeing a lot of lines that look like the one above.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Sometimes the line will be rotated clockwise of vertical, as shown here.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Sometimes the line will be rotated

counterclockwise of vertical, as shown here.

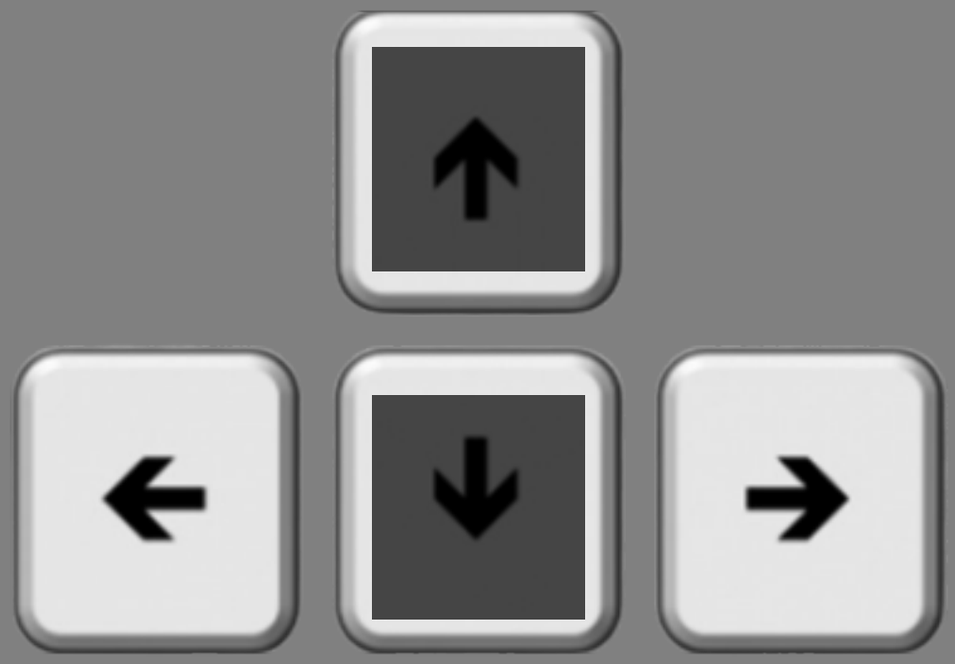
Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

During the study, you will be viewing a number of lines like these and you will be asked to report which direction the lines are tilted.

There are only two possible options: counterclockwise of vertical, like the line above.

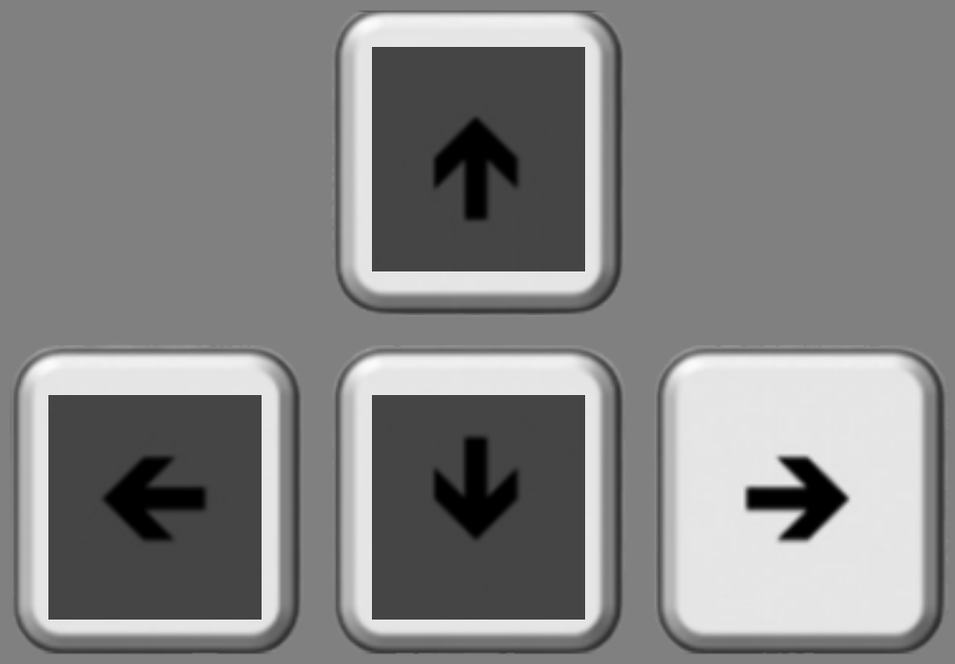
Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Or clockwise of vertical, as shown here.



You will make your response using the left and right arrow keys on your computer keyboard.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.



Press the right arrow key if the line is rotated clockwise of vertical.

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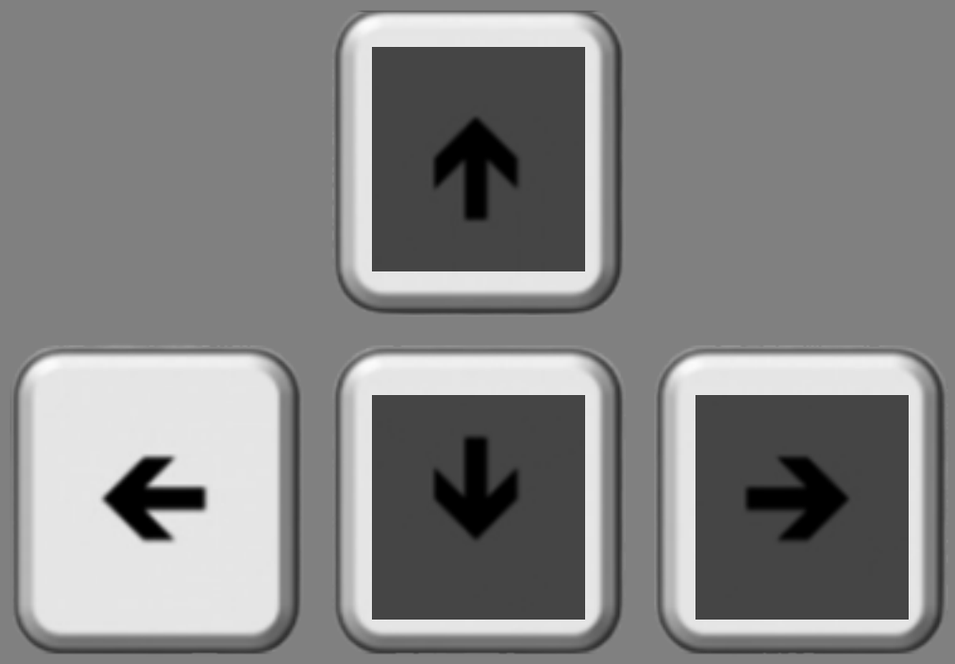


Press the left arrow key if the line is rotated counterclockwise of vertical.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Sometimes, it will be quite difficult, and you will just have to guess.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

So that’s the basic task.

Here’s how it will unfold.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Each trial will start with a blank screen and a fixation point. It's very important to keep your eyes on the fixation point the whole time.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

The color of the fixation point will vary in each trial.

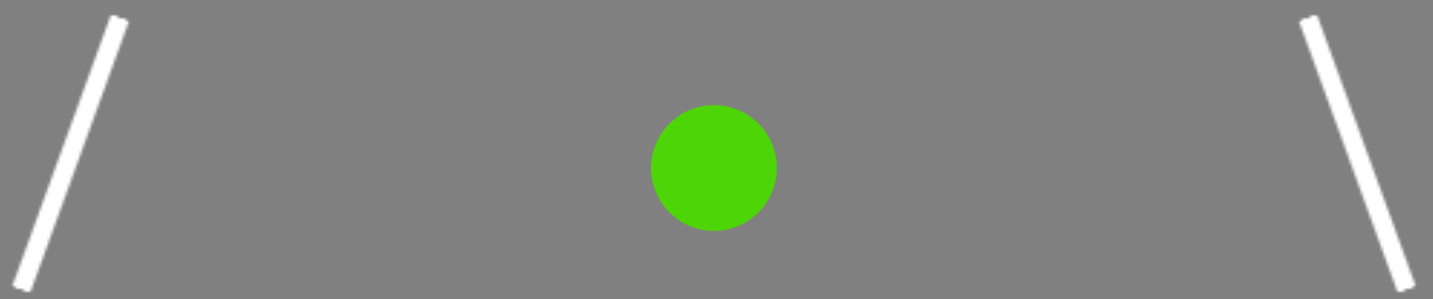
Sometimes it will be red.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Sometimes it will be green. However, the color of the fixation point does not provide any information about where the target line will appear.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

After a short time, two of the lines you just read about will briefly appear. One to the left of the fixation point and one to the right.



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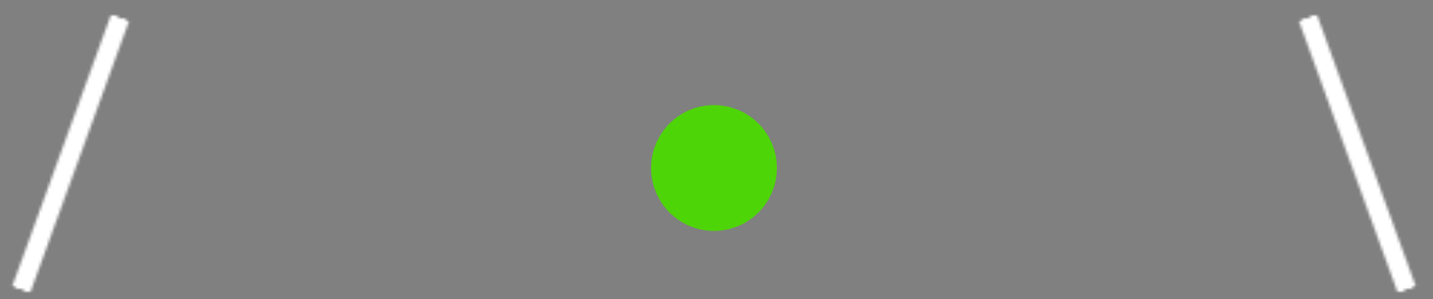

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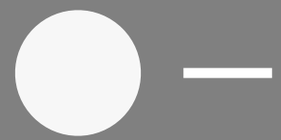
Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

After the lines disappear, a small dash will indicate which one you need to make a decision about.

In this example, the dash is on the right side of the fixation point and it is indicating that you should report the rotation of the line that was on the right.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Once the fixation color changes to white, you will have 1 second to enter your response. You should respond as quickly and accurately as possible.



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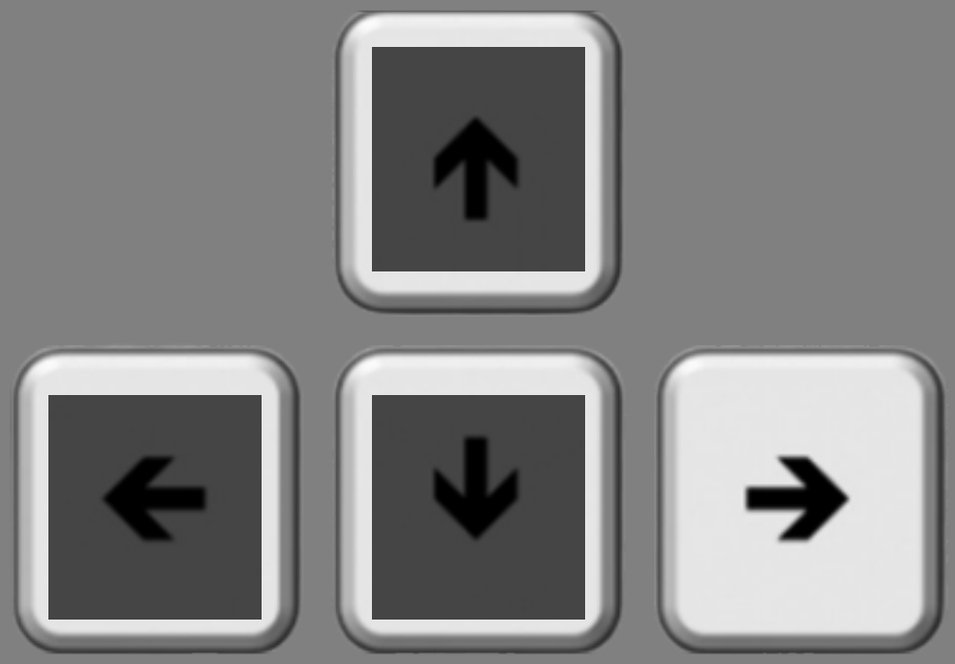
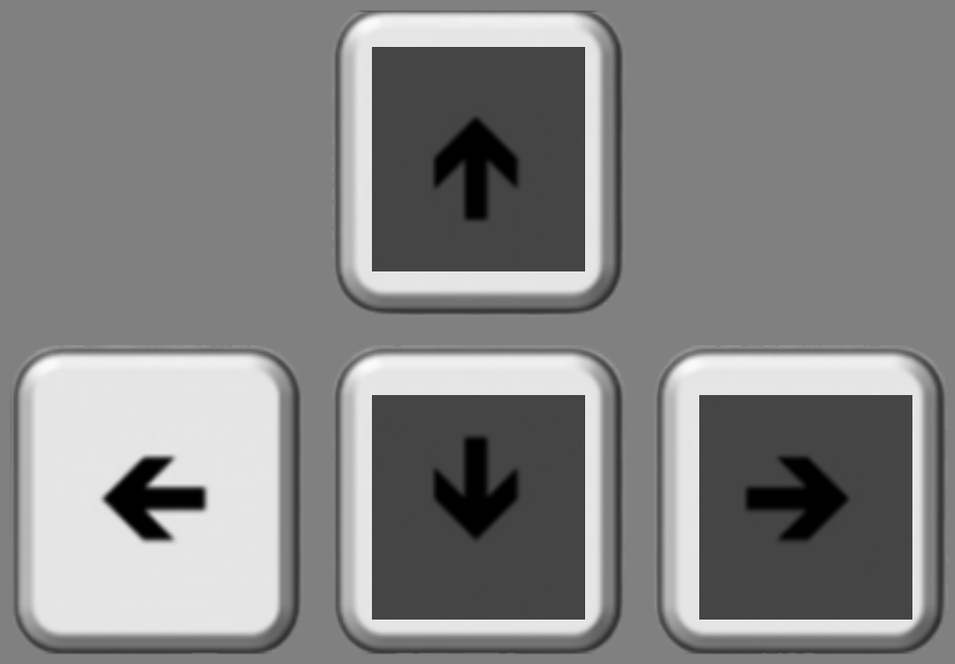


And remember, it's the right arrow key if the line was rotated clockwise of vertical.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.



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- Each block contains 96 trials.
- It should take ~5.5 minutes to complete each block. Feel free to take a short break between the blocks.
- You will start with 16 practice trials.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Don’t forget:
You won’t be able to enter your response until the fixation circle turns white.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Thank you for participating!

Press the **F** key to **FINISH**, press the **B** key to go **BACK**.

1060 ms response delay, enforced version

Please make your
web browser full screen.

Press the **N** key to go to the **NEXT** slide.

- This study may have three sessions.

- If you pass the two criteria listed below, you will be invited to participate in two additional, approximately one-hour sessions (for a total of 3 sessions):
  - Task accuracy in Session 1 must be greater than 60%
  - Number of early responses in Session 1 must be less than 10%
    - ✳ more details about early responses to come

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In this study, you will be seeing a lot of lines that look like the one above.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

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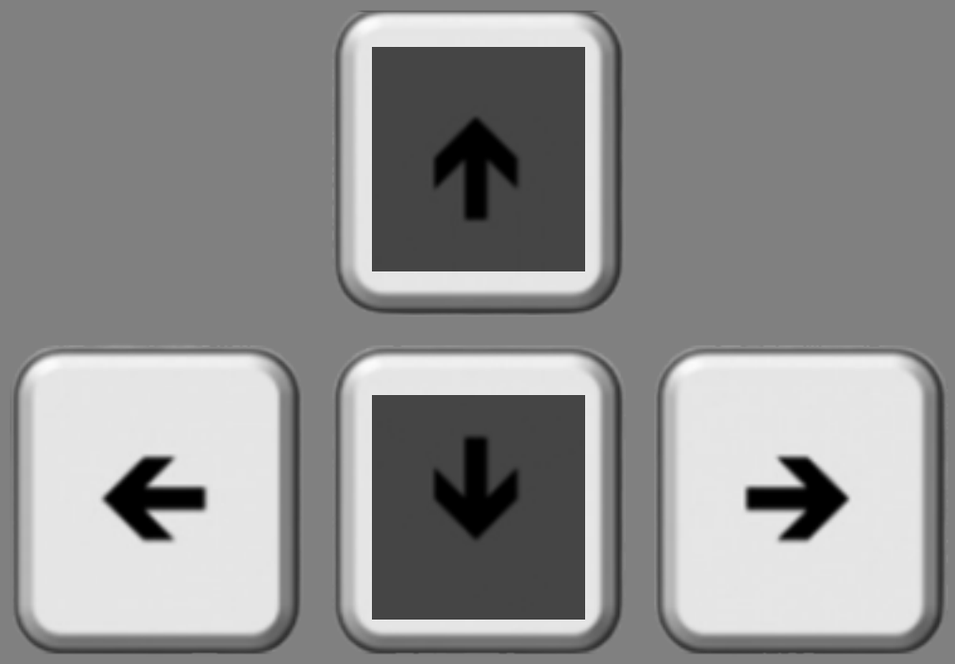

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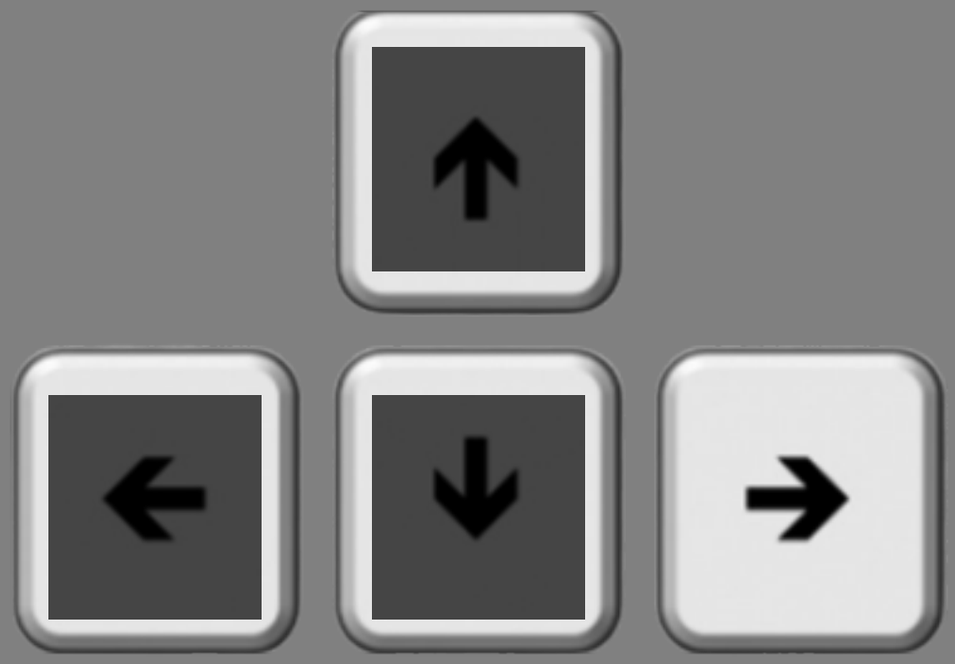

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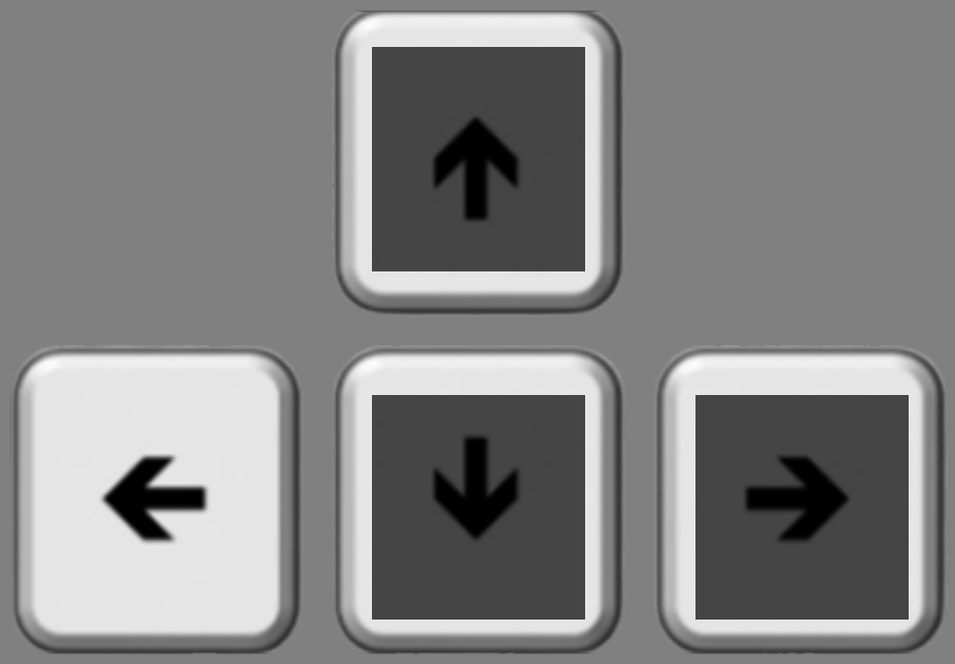

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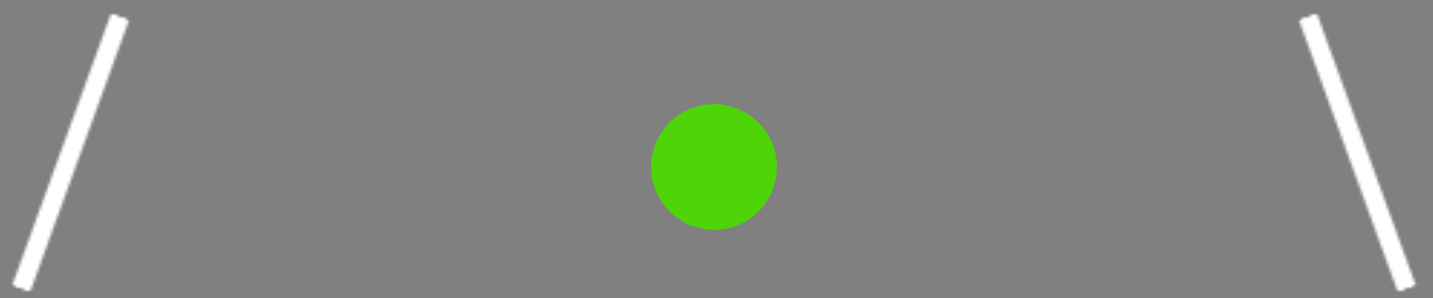

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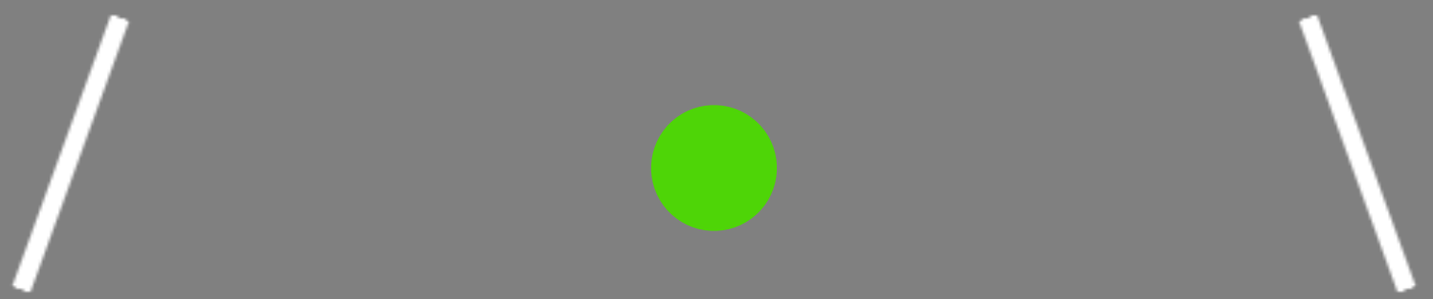

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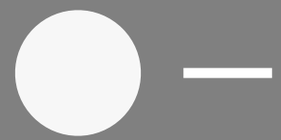
After the lines disappear, a small dash will indicate which one you need to make a decision about.

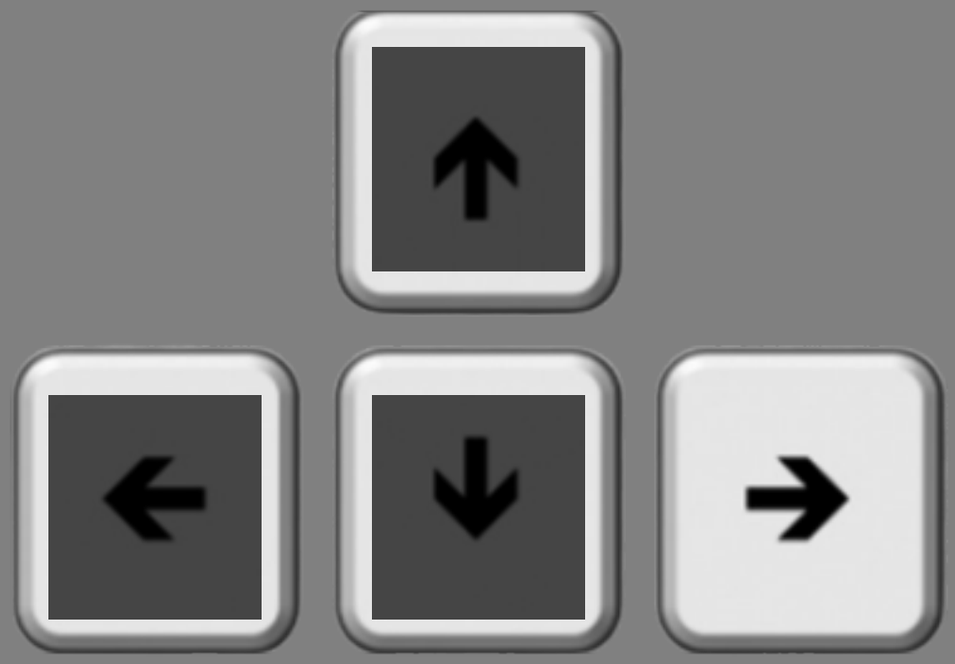
In this example, the dash is on the right side of the fixation point and it is indicating that you should report the rotation of the line that was on the right.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Once the fixation color changes to white, you will have 1 second to enter your response. You should respond as quickly and accurately as possible.

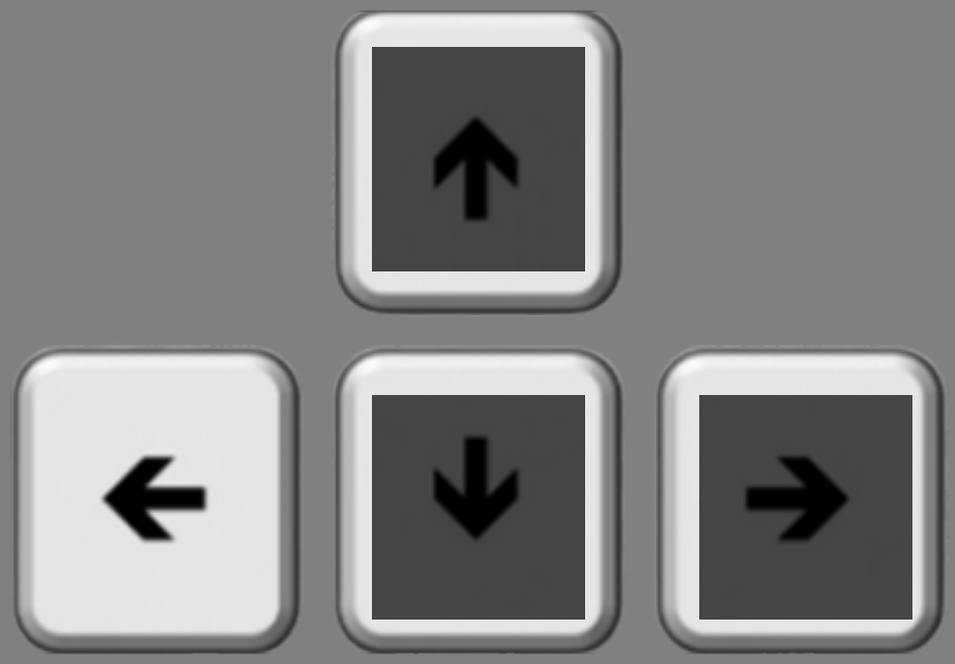


Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.



And remember, it's the right arrow key if the line was rotated clockwise of vertical.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.



And it’s the left arrow key if the line was rotated counterclockwise of vertical.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

If you were correct, a thumbs up image will briefly appear.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

If you were incorrect, a thumbs down image will briefly appear.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

If you do not respond within the 1 second window, a clock will briefly appear.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

In this experiment, *when* you respond is very important.

Press the **N** key to go to the **NEXT** slide.

If you respond before the fixation circle turns white, you will see the following message:

Please wait until the fixation circle turns white before responding.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

As mentioned before, to be eligible for the two additional sessions, the number of early responses in Session 1 must be less than 10%.

Press the **N** key to go to the **NEXT** slide.

- On some trials, you may notice small dots that flash somewhere on the screen.

- These flashes are irrelevant and will not provide any information about where the target line will appear.

- Do your best to ignore them.

- In total, you will complete 10 experimental blocks.
- Each block contains 96 trials.
- It should take ~5.5 minutes to complete each block. Feel free to take a short break between the blocks.
- You will start with 16 practice trials.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Don’t forget:
You won’t be able to enter your response until the fixation circle turns white.

Press the **N** key to go to the **NEXT** slide, press the **B** key to go **BACK**.

Thank you for participating!

Press the **F** key to **FINISH**, press the **B** key to go **BACK**.