



Task instructions

Please read these instructions carefully and only carry out the tasks you are instructed to do.

You can keep this sheet of instructions next to you throughout the experiment and refer to it again if needed. If you have any questions after reading all the information, you can ask the person responsible for the experiment. The experimenter will maintain a neutral presence and will only intervene if there is a procedural error or if you require technical assistance. They will not be observing your performance or judging your estimates. Do not turn or move any of the pages unless instructed to do so.

In front of you are four A4 pages that have been stacked face-down. On each of these pages, you will find a map. These maps depict parts of real cities. One route following the street network marked in yellow has been added to each map.

To the right of you are four small pieces of paper, each with a map number (Map 1 to Map 4), as well as 'Estimated route length:', followed by a blank line on which to write your distance estimations.

Read all the information for each step before doing the task or proceeding to the next step. Also, do not read the following steps before finishing the previous one. Do the following steps for each of the four maps in the correct order.

Part A

Step 1

Turn the map page that is currently on top of the stack in front of you around and place it at the front of the stack. There is a point in one of the corners of the page. Please make sure that this point is in the top left corner.

Step 2

Look at the map. As mentioned, one route has been added following the yellow street network. We would like you to estimate the total length of this route in metres. Please do not use any tools for assistance, such as your fingers, your pen or any other objects within reach. The aim is to **make a visual estimate**, not to measure the length of the route. This should take you less than a minute for each map.

Step 3

Take the first of the four small pieces of paper on your right, including the map number (the one at the top). Write the estimated length of the yellow route on the map in front of you onto the line after 'Estimated route length'. Be as precise as possible, but only write down whole metres (no decimal numbers).

Step 4

Turn the map around again and place it on the left face-down. Place the small paper with the route length estimation on top of the corresponding map on the left. If there is already a map and a small estimate paper on the left, place the map on top of the other papers, followed by the small estimate paper.

Step 5

Repeat steps 1–4 for the other three maps in front of you.

Step 6

Inform the person responsible for the experiment that you have provided an estimate for all four maps. They will then collect all the papers and give you four new maps, as well as four new small papers to be placed in the same locations as the previous maps and small papers.

Part B

Step 7

Repeat steps 1–5 for the four new maps. Note that maps 5–8 include metric cues including a scale bar (in metres) as well as a grid. You can use this additional information to make your visual estimates, but you should still not measure anything physically. Once you have completed steps 1–5 for maps 5–8, proceed to step 8.

Step 8

Thank you for completing the experimental part. The person responsible for the experiment will collect all the papers in front of you and ask you to fill out a questionnaire about the experiment. Your answers are anonymous and will help us interpret the results.



Post-Experiment Questions

Which of the following cities have you visited? Please tick the boxes next to the city names that you have visited.

- | | |
|---|--|
| <input type="checkbox"/> Okayama (Japan) | <input type="checkbox"/> Phnom Penh (Cambodia) |
| <input type="checkbox"/> Rabat (Morocco) | <input type="checkbox"/> Piombino (Italy) |
| <input type="checkbox"/> Timisoara (Romania) | <input type="checkbox"/> Santiago de Chile (Chile) |
| <input type="checkbox"/> Bulawayo (Zimbabwe) | <input type="checkbox"/> Monterrey (Mexico) |
| <input type="checkbox"/> I have visited none of the cities listed above | |

Have you recognised any of the places depicted on the map? If so, please specify which map it was (if you can recall) and which city you think it was.

- ☐ No.
- ☐ Yes, I think I recognised the city or cities depicted on map(s) _____. I think it was
-

If you recognised a map: Did the recognition influence your estimate for that map?

- ☐ Not at all
- ☐ Slightly
- ☐ Moderately
- ☐ Strongly
- ☐ Don't know / not applicable

Approximately what percent error do you think your estimates had, on average, compared to the true route lengths?

For maps without any metric cues:

- ☐ 0–5%
- ☐ 6–15%
- ☐ 16–25%
- ☐ 26–35%
- ☐ >36%

For maps with metric cues:

- ☐ 0–5%
- ☐ 6–15%
- ☐ 16–25%
- ☐ 26–35%
- ☐ >36%

☐ Don't know / no idea

☐ Don't know / no idea

Did you notice that the second set of maps (maps 5–8) depicted the same scenes and routes as maps 1–4, but were rotated and flipped?

☐ Yes

☐ No

How much do you agree with the statement: “I found it a lot easier to make the estimates after the scale bar and grid had been added.”

☐ Strongly disagree

☐ Disagree

☐ Slightly disagree

☐ Neither agree nor disagree

☐ Slightly agree

☐ Agree

☐ Strongly agree

Which map features did you use to help you estimate the route lengths? How did you use them?

For maps without any metric cues:

For maps with metric cues: Only metric cues mentioned

How often do you use digital maps such as Google Maps?

☐ Every 1-2 days

☐ Weekly

☐ Monthly

☐ A few times a year

☐ Once a year or less

| | |
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| | |
|--|--|
| <p>Map 1</p> <p>Estimated route length (m):</p> <p>_____</p> | <p>Map 3</p> <p>Estimated route length (m):</p> <p>_____</p> |
| <p>Map 2</p> <p>Estimated route length (m):</p> <p>_____</p> | <p>Map 4</p> <p>Estimated route length (m):</p> <p>_____</p> |
| <p>Map 5</p> <p>Estimated route length (m):</p> <p>_____</p> | <p>Map 7</p> <p>Estimated route length (m):</p> <p>_____</p> |
| <p>Map 6</p> <p>Estimated route length (m):</p> <p>_____</p> | <p>Map 8</p> <p>Estimated route length (m):</p> <p>_____</p> |