

2. Decide on your variables of interest

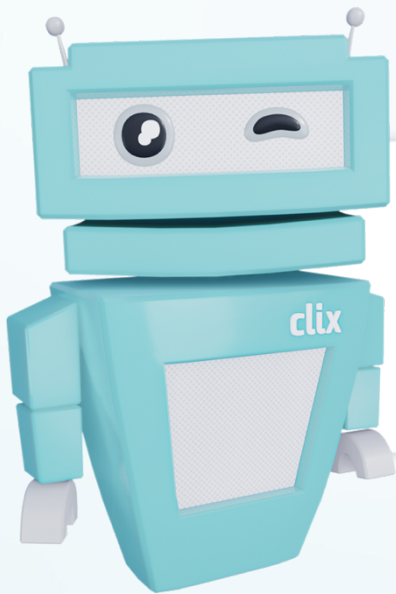
What are the variables in your question? A variable is a characteristic, number or quantity that can be measured or counted. Examples of variables are height, age, distance, time, number of pets etc. What is the data type of your variables? Are they numerical (discrete or continuous) or categorical (ordinal or nominal)? How will you measure your variables (e.g., height will be measured in cm, time will be measured in minutes, opinions will be measured on a scale from 1-5 with 1 being best and 5 being worst)

| |
|---------------------|
| Max 10 lines |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |
| |

3. Data Collection Plan

Describe how you will gather your data. State the sample & population of your investigation. How will you select your sample? Is the data representative of your population? Include a copy of your questionnaire, experiment design or survey.

| Graphically | Numerically |
|--|---|
| <p>Create various graphs and/or tables to help visualise your data. You want to try and see what's happening with your data so creating multiple graphs may be necessary to get the full picture.</p> <p>Say what you see. In every graph explain what you see and say what is happening with the data. Are there any extreme values, is it increasing or decreasing, or does it follow a certain shape or curvature? How are the variables impacting each other? Is something happening in one group and not the other?</p> | <p>Here you should calculate appropriate measures of centre (mean, mode & median), measures of spread (range) and/or proportions (ratios, percentages) to try and understand your data.</p> <p>You may do these calculations on the entire data set or perform calculations on various groups/categories. E.g., you may calculate the mean speed for boys and the mean speed for girls and then compare the two to try help find out who is faster.</p> |
| <p>Use graphs to compare your categorical groups. For example, if you're comparing iPhone users' screen time against Android users, you might create a histogram for the iPhone users, and then the Android users and use these visuals to directly compare the shape and distribution of the data. You could also make a stacked histogram directly to compare the two.</p> | <p>If you're comparing groups be sure to make direct comparisons between calculations such as the mean, mode or median. For example, you might calculate the mean speed of boys and the mean speed of girls and directly compare the two figures. You should be using these calculations to try to build an answer to your statistical question.</p> |
| <p>Make sure you use graphs appropriate to your data. See the table on page 8 for appropriate graphs to use for different types of data.</p> | <p>Explain each calculation. Every calculation should come with an explanation of what it represents in terms of the data and the context of your question.</p> |



Best of luck in the exam!
You will be great

