UNIVERSITEIT VAN PRETORIA
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YUNIBESITHI YA PRETORIA

wst 212 - Practical 0 submission

Instructions:

- Complete the questions which follow and save all your code in a single **R** script, named **Practical0.R**
- Two submissions are required for this Lab, namely a code submission and an interpretation submission. The icons shown below are used in the questions to indicate which parts need to be included in which submission.

Submission 1: Code 💻

- Multiple code submissions are allowed and your autograded results will be available shortly after each submission.
- **Ensure all variables are named correctly, as incorrectly named variables will not be awarded any marks. (**Remember variable names are case sensitive.**)**
- Ensure your code does not consist of any syntax errors. If your code produces errors when run, the autograder will not be able to mark it.
- Any code commented out (code is commented out when # is typed in front of it) will be considered rough work and will not be marked.
- Once you have completed your submission, ensure the file is submitted on **Gradescope**, with the correct file name. The autograder will only be able to grade your submission if you use the correct filename.

Submission 2: Interpretation 🕮

- **After completing the code submission**, also complete the interpretation submission.
- You will only have **one attempt** which must be completed in one sitting. Even if you close the browser, the timer will continue counting down.
- You will have **45 minutes** to complete this submission (you should however be able to do this in less than 15 minutes).
- If you accidentally submit your test but you still have time left, simply click on the resubmit button to continue. The resubmit button will disappear when the timer runs out.
- You may be expected to upload plots produced in R. Ensure that these plots are clear and labelled appropriately. Save the plots you created as .jpeg or .png files on your device before opening the interpretation submission.

Guidelines:

- The following code in the provided template will generate and save the necessary data within an object called **Heights**:
  ```
  Heights <- seq(150,210)
  ```
- A template that can be used for this assignment has been provided on ClickUP.
- Remember to assign your code to the variables indicated in this document.

Questions:

1. 💻 Assign the value, 5 into a variable `Y`.
2. 💻 Calculate the value of $\frac{-b-\sqrt{b^2-4ac}}{2a}$, given that a = 4, b = 3 and c = -8. Save your response into a variable `X`.
3. 💻 Round the value saved in the variable `X`, to 3 digits. Save your response into a variable `X_rounded`.
4. 💻 Use the vector `Heights` and calculate the average height. Save your response into a variable `Mean_Height`.
5. 💻 Append your variable `Mean_Height` to the end of the vector `Heights`. Save your response into a new vector called `Updated_Heights`.
6. 💻 Extract the even valued height values, saved in `Heights`. Save your response into a new vector called `Even_Heights`.