

MAS1802 Assignment 3 Feedback

Overall Feedback

- Generally marks were good and most people seemed to be happy with how functions work.
- Brackets were a bit chaotic though, lots of unnecessary ones - which is fine but **makes debugging harder**, and some necessary ones missing. If in doubt try things in R to see the order it will run them.
- **Lots of typos** in variable/function names caused errors. In particular **be careful when capitalising** names!
- Failing to **declare what variables are within the function** (e.g. “n = length(x)”) cost several people marks.

Question 1: MySD

- Generally well done, most people got full marks.
- **Lots of abuse of for loops**, in particular things being left inside for loops which shouldn't be. Things being defined (e.g. "total = 0") will get **redefined every time it loops around!**
- A few people used **built in functions** (e.g. mean and sum) which is **forbidden** - meaning 0 marks were awarded.
- A few people also forgot to include the helper function they used for the mean etc.
- Not **including brackets** was a common issue here (e.g. for the $1/(n-1)$ part of the sd formula - not including brackets will give the wrong answer!).

Question 2: MyDifference

- Again most people did very well here, the most common approach being just to use a previously defined “MyMean” function twice and return the difference.
- Worth noting it wasn't necessary to write the “MyMean” function out again for x and y , the same function will work fine with different inputs.
- Again some people fell foul of using the in built R functions mean and sum, costing them the marks for this question.

Question 3: MyMedian

- This question caused the most problems for people.
- A very common mistake was **forgetting to save the sorted vector** as anything, and so the “x” being used for the rest of the function was the original, unsorted, vector.
- Another common issue was failing to account for both cases where the **vector length could be even or odd** - with a different median formula needed in each case.
- It is important to be careful when having lots of vectors and indexes within a function, make sure you're doing the right thing to the right vector!

Question 4: IsEven

- Most people were fine with this question and made use of the modulo function to determine if the value was even.
- The most common issue here was people **returning a character string** ("True" or "TRUE") instead of a **Boolean** (TRUE) which has special significance in computing (e.g. how "if" statements work).