Guidelines to Write the Report:

- Your report should not be longer than 4 pages, citations excluded.
- Use 1 inch for top, bottom, left and right margins
- You can write the report the way you want, considering the message you want to give. A common structure is the following

    1. Introduction
    2. Statement of the Problem
    3. Numerical method
    4. Results
    5. Discussion/Conclusions
    6. Bibliography

- No matter if you decide to follow the above structure or not, your report should have a final discussion. The final discussion is the most important part of your report.
- For your assignment keep the introduction and the description of the problem as short as possible.
- There is no need to describe/derive the numerical methods as in a book. You only need to briefly recall the method you are using to the reader and highlight the properties you use. You should justify the reasoning behind your choice(s) of numerical method(s).

Evaluation:

Criteria	not accepted	major revision	minor revision	accepted
Language & Grammar	Major grammatical errors	Few grammatical errors	Few typos	Few typos
Clarity & Exposition	Convoluted sentences	A few ideas exposed clearly	Most ideas expose clearly and logically	Ideas clearly exposed in logical sequence
Critical Thinking	Several inconsistencies	Some inconsistencies	Few inconsistencies	No inconsistencies
Mathematical Notation/Language	Misuse of notation	Some correct use of mathematical notation	Mostly correct use of mathematical notation	Correct use of mathematical notation
Conciseness & Structure	Unclear structure, overdeveloped/underdeveloped sections	Not so clear structure, with some overdeveloped/underdeveloped sections	Clear structure, sections have the right format,	Clear and logical structure, sections are not too long containing at the same time all the information to needed to understand, use of bibliography
Visual Presentation	Figures are unclear, legends are not legible, no/empty captions	Some figures clear with legible legends, captions are slightly descriptive	Figures are mostly clear, legends are mostly legible, captions are mostly descriptive	Figures are clear, legends are legible, captions are descriptive

Table 1: Rubric

Using the above table we will check your report for each criteria. The final grade is the grade of the worse criteria. Therefore, the report is accepted only if all criteria are accepted. Similarly the report is graded as in need for minor revision if there are no criteria which require major revision. Finally the report is graded as in need for major revision if there are no criteria which are not accepted. If one criteria is not accepted, then the whole report is not accepted.

How we rate the criteria:

In the following, I will give you some examples of "good" and "bad" writing practices in mathematics. For each criteria we will use the following guidelines:

Accepted: No bad, a few not so good, but mostly good.

Minor Revision: A few bad, but mostly good.

Major Revision: Some bad and some good.

Not Accepted: A lot of bad, not enough good.

Examples of Good and Bad practices:

Language & Grammar:

Good: Fixed point iterations converge under suitable assumptions on the iteration function ϕ and its first derivative.

Good: Under suitable hypothesis on the function ϕ and its derivative, the fixed point iterations converge.

Bad: Fixed point iterations converge under some conditions on the function ϕ and it's first derivative.

Bad: Fixed point iteration work if the function ϕ as some properties.

Clarity & Exposition:

Good: Abel's theorem guarantees that there does not exist an explicit form to compute all the zeros of a generic polynomial p_n, when $n \geq 5$.

Good: For a polynomial p_n, with $n \geq 5$, Abel's theorem guarantees that an explicit form to compute all of its zeros does not exist.

Bad: For polynomial with $n \geq 5$, Abel's theorem says we cannot compute all the zeros of p_n, at least explicitely.

Bad: If $n \geq 5$ then there exist a theorem, Abel's theorem, saying that for a polynomial p_n you cannot compute all of its zeros.

Critical Thinking:

Good: Given property A, B follows because [...]. Given B and C, we can conclude D.

Good: The problem has property A and C. Since B follows from A, we can also conclude D.

Bad: Given A and C, we found D.

Bad: D happened.

Mathematical Notation:

Good: A sequence x_n converges if $\lim_{n\to\infty} |x_n| \to 0$.

Good: If the $\lim |x_n| \overset{n\to\infty}{\longrightarrow} 0$. then the sequence x_n converges.

Bad: The x_n converge if $\lim |x_n| \to 0$.

Bad: x_n converges if $\lim |x_n|$ goes to zero.

Conciseness:

Good: Although the function $f(x)$ is continuous, its derivative has a singular point.

Good: Since the function $f \in C^0(D)$, then its derivative may have a discontinuity.

Bad: Since $f \in C^0(D)$, $\exists\, x_0 \in D:\ f\left(x_0^+\right) - f\left(x_0^-\right) \neq 0$.

Bad: The function f, which is a continuous function over its domain of definition D, may have a discontinuous derivative, because taking derivatives reduces the smoothness of a function.

Visual Presentation:

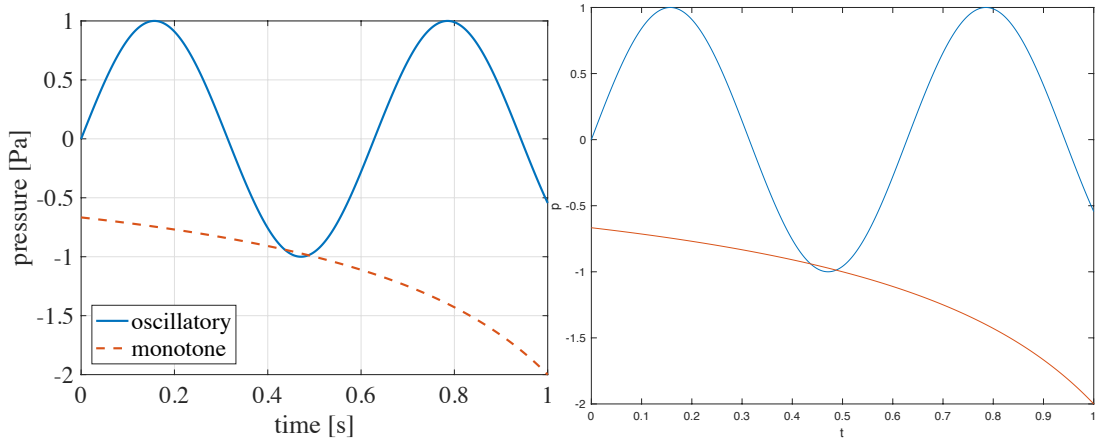

Figure 1: Good on the left; bad on the right.

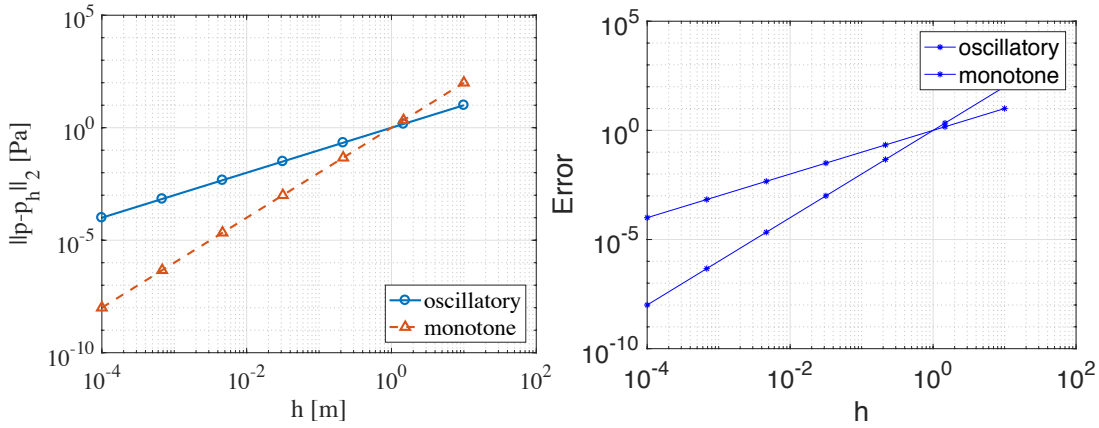

Figure 2: Good on the left; bad on the right.