# Annex 9

**RUBRIC TO EVALUATE THE MATHEMATIC PHASE**

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|  | **Excellent (1 pto.)** | **Good (0,75 pto.)** | **Regular (0,5 pto.)** | **Insufficient (0,25 pto.)** | **Total score** |
| **Objectives** | The objective of the practice is clearly identified and presented. | The objective of the practice is identified, but it is presented in a not very clear way. | The objective is partially identified and is presented in a way that is not very clear. | The aim of the practice is wrong and irrelevant. |  |
| **Theoretical framework** | * Performs a bibliographical review where the research topic is presented in an orderly manner, its importance and implications. * Includes bibliographic or hemerographic references in the text. * There is no true copy of the texts consulted. | * Performs a bibliographical review where the research topic is presented in an orderly manner, its importance and implications. * Does not include bibliographic or hemerographic references in the text. * There is no true copy of the texts consulted. | * Performs an incomplete literature review. * Does not include bibliographic or hemerographic references in the text. * There is a partial copy of the consulted texts. | * It is incongruous to the topic. * It is a faithful copy of the consulted texts. |  |
| **Materials and equipment used** | All materials used in practice are described clearly and precisely. Apparatus and setup sketches are neat, easy to read, and fully labeled. | The materials used in practice are partially described clearly and precisely. A labeled sketch of an apparatus is included. | The materials are presented without description and clarity. | Materials are listed incompletely, without description of these. |  |
| **Procedure** | The procedures are listed with clear steps. Each step is numbered and is a complete sentence. | The procedures are listed in a logical order, but the steps are not numbered and/or are not complete sentences. | Procedures are listed, but are not in a logical order or are difficult to follow. | The procedures do not accurately list all the steps of the experiment. |  |
| **Data table** | A data table is presented with all the variables calculated in practice, the values ​​obtained from the calculations are correct. | A data table is presented with all the variables calculated in practice incomplete, the values ​​obtained from the calculations are correct. | A data table is presented with all the variables calculated in practice, the values ​​obtained from the calculations are incorrect. | A data table is presented with all the variables calculated in practice incomplete, the values ​​obtained from the calculations are incorrect. |  |
| **Diagrams** | It includes clear and precise diagrams that facilitate the understanding of the experiment. The diagrams are labeled in a neat and precise way. | Included are diagrams that are labeled in a neat and precise manner. | Diagrams are included and these are labeled. | Important diagrams are missing or important labels are missing. |  |
| **Results** | * Compiles and orders the data obtained, presenting them in clearly identified paragraphs, charts or graphs. * Includes formulas and substitutions used. | * Collects and orders the data obtained by presenting them in paragraphs, charts or graphs, but does not clearly identify them. * does not include the formulas and substitutions used | * Collects and orders the data obtained by presenting them in paragraphs, charts or graphs, but does not clearly identify them * Does not include the formulas and substitutions used | The results presented are incorrect. |  |
| **Analysis** | The relationship between the variables is discussed and the trends or patterns logically analyzed. | The relationship between the variables is discussed and the trends or patterns lightly analyzed. | The relationship between the variables is discussed, but neither the patterns, trends, nor predictions are facts based on the data. | The relationship between the variables is shown with errors. |  |
| **Appearance and Organization** | The lab report is typed and uses headings and subheadings to visually organize the material. | The lab report is carefully handwritten and uses headings to visually organize the material. | The lab report is neatly written or typed, but the format does not help visually organize the material. | The lab report is handwritten and looks sloppy with crossouts, multiple smudges, and/or tears and creases. |  |
| **Conclution** | Write in your own words whether or not the objectives are met based on the analysis of the results. | Write in your own words whether or not the objectives are met based on the analysis of the results. | Does not write in his own words if the objectives are met or not or does not consider the analysis of the results. | The conclusions bear no relation to practice. |  |