



## Title: Maximum of 14 Words, Written in 14pt, Bold, Capitalizing Each Word

**First Author**<sup>1\*</sup> (Orcid ID: <https://orcid.org/0000-0002-2973-XXXX>), **Second Author**<sup>2</sup> (Orcid ID: <https://orcid.org/0000-0002-2973-XXXX>), **Third Author**<sup>3</sup> (Orcid ID: <https://orcid.org/0000-0002-2973-XXXX>) ← 12pt, bold

<sup>1</sup>Mathematics Education Study Program, Faculty of Mathematics and Natural Sciences, Universitas Negeri Makassar ← 10pt

<sup>2,3</sup>Mathematics Education Study Program, Faculty of Teacher Training and Education, Universitas Muhammadiyah Makassar ← 10pt

---

### Article Info

#### Article history:

Received Jun 26, 202x

Accepted Feb 24, 202x

Published Online Jun 30, 202x

#### Keywords:

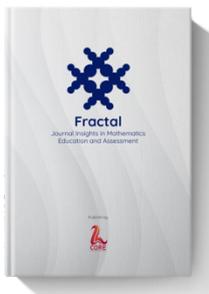
First keyword

Second keyword

Third keyword

Fourth keyword

Fifth keyword



---

### ABSTRAK

The article must include an abstract of 200–300 words. The abstract should not repeat information already stated in the title. It must be written in Indonesian and should provide sufficient detail, containing at least:

**Background:** An introductory statement explaining the importance of the research,

**Objective:** The research objectives,

**Method:** A summary of the methodology (including subjects, instruments, data collection procedures, or data analysis),

**Results and Findings:** The research results/findings, and

**Novelty:** Novelty of the study.

**Implication:** Implication of the Study



This is an open access under the [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) licence



---

### Corresponding Author:

First Author,

Mathematics Education Study Program,

Faculty of Mathematics and Natural Sciences,

Universitas Negeri Makassar

Jalan Malengkeri Raya, UNM Parang Tambung Campus, Makassar, South Sulawesi 90224, Indonesia

Email: [muhammad.ikram@uncp.ac.id](mailto:muhammad.ikram@uncp.ac.id)

---

**How to Cite:** Author 1 & Author 2. (2022). Instructions/template for preparing manuscript for journal on mathematics education. *Fractal: Journal Insights in Mathematics Education and Assessment*, x(x), xx-xx. <http://doi.org/10.22342/jme.v13i1.xxxx>

---

## Introduction

The introduction must be clear and written descriptively, containing at least the following elements: the significance of the research by reviewing both international and national issues with clearly cited sources; the researcher's response to the issues presented; findings from previous studies related to the stated issues, leading to the identification of the research gap between the current study and previous works; the novelty or research niche addressed, supported by relevant primary theories; and the specific focus of the present research. This section should conclude the introduction, in which the objectives or research questions are written descriptively without bullet points or numbering.

For example, *Reversible reasoning is one of the important aspects to be developed in students* (Ikram et al., 2020).

For convenience, authors are encouraged to use this template in its entirety by replacing each section with their own content so that the submitted article fully complies with the guidelines, while deleting unnecessary sections to avoid errors in other parts of the manuscript.

## Method

The research methodology must be explained clearly. This section should describe, at a minimum, the research design employed and the rationale for selecting that design, the research subjects (including demographic information, if available), the research instruments and the reasons for their use, the data collection procedures undertaken, and the data analysis techniques applied to obtain the findings. These elements should be presented in a logical order and organized under appropriate subheadings. At a minimum, the methodology section should include the following subsections:

### Type of Research/Design (12 pt)

This subsection should describe the type of research conducted in the article.

### Subjects/Population and Sample (12 pt)

This subsection should provide an overview of the subjects, population, and sample involved in the study.

### Instrument (12 pt)

This section should describe the instruments used by the researcher in the study, accompanied by an example of the instrument as shown in the following table.

**Table 1.** Task Description

Tasks	Task Characteristics
<p><b>Task #1.</b> Given that <math>f'</math> is the derivative of <math>f</math> and the graph of <math>f'</math> is provided in the following figure, sketch the corresponding graph of <math>f</math>.</p> 	<p>Students should consider a situation where: (1) <math>f'</math> is positive for the interval <math>(0, 1)</math>; (2) <math>f'</math> is negative for the intervals <math>(-\infty, 0)</math> and <math>(1, \infty)</math>; (3) <math>f'</math> is increasing for the interval <math>(-\infty, -1)</math>; (4) <math>f'</math> is decreasing for the intervals <math>(-1, 0)</math> and <math>(0, \infty)</math>; (5) <math>f'</math> intersects the x-axis at <math>x = -1</math> and <math>x = 1</math> or <math>f'(-1) = f'(1) = 0</math>; and (6) <math>f'</math> is discontinuous at <math>x = 0</math>.</p>

**Task #2.** Sketch the graph of a function  $f$  that satisfies the following properties:

- ✓  $f'(1) = f'(5) = 0$ ;
- ✓  $f'(x) > 0$  for  $-2 < x < 1$  and  $5 < x < 7$ ;
- ✓  $f''(x) > 0$  for  $3 < x < 7$  and  $x > 7$ ;
- ✓  $f(x) = -\infty$  and  $f(x) = \infty$

Students should consider the graph of  $f$  that meets all four of the stated properties as well as some additional information that is not explicitly required by the problem.

### Procedure/Data Collection (12 pt)

This subsection should describe in detail the procedures or data collection methods employed by the researcher.

### Data Analysis (12 pt)

This subsection should explain the extent to which the data were analyzed, whether quantitatively, qualitatively, or using a combination of both approaches.

### Research Findings (12 pt)

This section should present the research results clearly and in detail. The findings may be organized according to the results of each research phase, the outcomes addressing each research question, or other appropriate arrangements, as long as the presentation clearly reflects the research conducted. The research findings should be supported by empirical evidence.

### Discussion (12 pt)

The discussion should address the research findings without repeating the explanations presented in the results section. It must refer to relevant theories or previous studies to determine whether the current findings contradict or support prior theories or research outcomes. Furthermore, the discussion should clearly highlight the novelty of the results in comparison with previous studies.

### Conclusion (12 pt)

The conclusion should be written descriptively, without numbering or bullet points. It must answer the research questions or problems posed in the study. The conclusion should not simply restate sentences from the results or discussion sections; instead, the author should abstract the content of the article in relation to the research questions. This section should also describe the research contributions, acknowledge any limitations of the study, and provide recommendations for future research..

### Acknowledgments (Optional, if applicable)

In the Acknowledgments section, authors may include the names of funding organizations or institutions involved in the research. Acknowledgments may be given to: (1) parties providing financial assistance and support, (2) departmental and institutional support, and (3) professionals who contributed to the preparation of the research.

### Conflict of Interest

Authors may choose one of the following statements:

- The authors declare no conflict of interest.
- The authors must state any conflict of interest in detail.

### Author Contributions

All authors confirm that they have read and approved the final version of this manuscript. The contribution of each author to the development of the research should be stated in a single paragraph, using only initials followed by a period. Percentages should be used to indicate each author's contribution (from a total of 100%).

Example: M.I. conceptualized the research idea presented and collected the data. The other two authors (M.M. and S.) actively contributed to the development of the theory, methodology, data organization and analysis, discussion of the results, and approval of the final version of the work. All authors confirm that they have read and approved the final version of this manuscript. The percentage contributions for the conceptualization, drafting, and revision of this paper are as follows: M.I.: 40%, M.M.: 30%, and S.: 30%.

### Data Availability Statement

Please select only one of the following:

- The authors declare that data sharing is not applicable, as no new data were created or analyzed in this study.
- The authors state that the data supporting the findings of this study will be made available by the corresponding author, [corresponding author's initials], upon reasonable request.
- The data supporting the findings of this study are available as “supplementary files” on the *Fractal: Journal Insights in Mathematics Education and Assessment* website [Supplementary files must be uploaded along with the manuscript upon submission].
- The data supporting the findings of this study are available for consultation only at [site name] via the following link: [list resources and URL].

### References (12 pt)

The References section must include all references cited in the manuscript, listed in alphabetical order and typed in single spacing. All references cited in the manuscript must appear in the References section, and vice versa. A minimum of 20 references should be used, consisting of at least 80% from journal articles and the remainder from other sources. Authors

must also input all references used into the OJS system. References and in-text citations must follow the APA Style 7th edition, as illustrated in the following example:

**Book (single author)**

McKibben, B. (1992). *The age of missing information*. New York, NY: Random House.

**Book (multiple authors)**

Larson, G. W., Ellis, D. C., & Rivers, P. C. (1984). *Essentials of chemical dependency counseling*. New York, NY: Columbia University Press.

**Edited book chapter**

Cobb, P., & Gravemeijer, K. (2006). Design research from a learning design perspective. In L. Akker, K. Gravemeijer, S. McKenney, & N. Nieveen (Eds.), *Educational design research* (pp. 17–51). New York, NY: Routledge.

**Print journal article**

Gabbett, T., Jenkins, D., & Abernethy, B. (2010). Physical collisions and injury during professional rugby league skills training. *Journal of Science and Medicine in Sport*, 13(6), 578–583.

**Online journal article with DOI**

Ikram, M., Purwanto, I. N., Parta, I. N., & Susanto, H. (2020). Mathematical reasoning required when students seek the original graph from a derivative graph. *Acta Scientiae*, 22(6), 45–64. <https://doi.org/10.17648/acta.scientiae.5933>

**Online conference proceedings**

Ikram, M., Purwanto, I. N., & Susanto, H. (2020). Relationship between reversible reasoning and conceptual knowledge in composition of function. In *Journal of Physics: Conference Series* (Vol. 1521, p. 032004). [https://doi.org/\[masukkan DOI jika tersedia\]](https://doi.org/[masukkan DOI jika tersedia])

**Unpublished dissertation**

Ikram, M. (2013). *Eksplorasi penalaran siswa dalam pemecahan masalah trigonometri ditinjau dari kemampuan berpikir logis pada siswa kelas XII-IPA* (Unpublished doctoral dissertation). Universitas Negeri Makassar, Makassar, Indonesia.

**Author Biographies**

**Muhammad Ikram**, is a lecturer and researcher at the department of mathematics education, faculty of mathematics and natural science, Universitas Negeri Makassar, South Sulawesi, Indonesia. His research interest is Reversible Reasoning, Calculus Problems, and Thinking Processes. Email: [muhammad.ikram@uncp.ac.id](mailto:muhammad.ikram@uncp.ac.id)

**Muhammad Muzaini**, is a lecturer and researcher at the Mathematics Education Study Program, Faculty of Teacher Training and Education, Universitas Muhammadiyah Makassar, South Sulawesi, Indonesia. His research interest is Quantitative Reasoning. Email: [muhammad.ikram@uncp.ac.id](mailto:muhammad.ikram@uncp.ac.id)

**Sirajuddin**, is a lecturer and researcher at the Mathematics Education Study Program, Faculty of Teacher Training and Education, Universitas Muhammadiyah Makassar, South Sulawesi, Indonesia. His research interest is Translation representation. Email: [muhammad.ikram@uncp.ac.id](mailto:muhammad.ikram@uncp.ac.id)

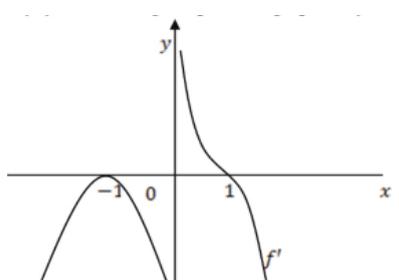
## Margins

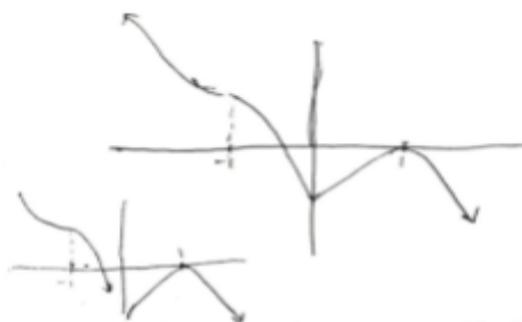
The manuscript should be prepared on A4 paper with margins of 2.5 cm on the top, left, bottom, and right sides.

## Table and Figure Formatting

Tables should be numbered consecutively starting from Table 1. Whenever possible, each table should be presented on a single page. If a table extends beyond one page, the first row must be repeated as the table header on each subsequent page. Use single spacing within tables. Figures included in the manuscript must be of high resolution to ensure clarity and avoid pixelation. Every figure should have a clear relevance to the manuscript and should not be included solely for decorative purposes. Figures must be numbered consecutively starting from Figure 1. Figure numbering should be independent from table numbering, and vice versa.

**Table 1.** Task Description

Tasks	Task Characteristics
<p><b>Task #1.</b> Given that <math>f'</math> is the derivative of <math>f</math> and the graph of <math>f'</math> is provided in the following figure, sketch the corresponding graph of <math>f</math>.</p> 	<p>Students should consider a situation where: (1) <math>f'</math> is positive for the interval <math>(0, 1)</math>; (2) <math>f'</math> is negative for the intervals <math>(-\infty, 0)</math> and <math>(1, \infty)</math>; (3) <math>f'</math> is increasing for the interval <math>(-\infty, -1)</math>; (4) <math>f'</math> is decreasing for the intervals <math>(-1, 0)</math> and <math>(0, \infty)</math>; (5) <math>f'</math> intersects the x-axis at <math>x = -1</math> and <math>x = 1</math> or <math>f'(-1) = f'(1) = 0</math>; and (6) <math>f'</math> is discontinuous at <math>x = 0</math>.</p>
<p><b>Task #2.</b> Sketch the graph of a function <math>f</math> that satisfies the following properties:</p> <ul style="list-style-type: none"> <li>✓ <math>f'(1) = f'(5) = 0</math>;</li> <li>✓ <math>f'(x) &gt; 0</math> for <math>-2 &lt; x &lt; 1</math> and <math>5 &lt; x &lt; 7</math>;</li> <li>✓ <math>f''(x) &gt; 0</math> for <math>3 &lt; x &lt; 7</math> and <math>x &gt; 7</math>;</li> <li>✓ <math>f(x) = -\infty</math> and <math>f(x) = -\infty</math></li> </ul>	<p>Students should consider the graph of <math>f</math> that meets all four of the stated properties as well as some additional information that is not explicitly required by the problem.</p>



**Figure 1.** Subject's Solution

Sketch