



The Influence of Resilience and Mathematical Literacy on Students' Mathematical Problem Solving Abilities

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ABSTRACT

Mathematics learning in schools is often viewed as a mechanical process that emphasizes memorizing formulas, resulting in students being less able to relate concepts to real-world situations and experiencing difficulties in solving non-routine problems. This condition demands strong resilience and mathematical literacy skills so that students can survive, adapt, and think flexibly when facing problems. This study was conducted to analyze the influence of resilience and mathematical literacy on the ability of junior high school students to solve mathematical problems. The method used is a quantitative correlational study with a population of all seventh grade students of SMPN 27 Kota Tangerang in the 2025/2026 academic year and a sample of 36 students selected through cluster random sampling. Data in this study were obtained through resilience and mathematical literacy questionnaires and mathematical problem solving ability tests. All instruments have undergone validity and reliability tests before use. Data analysis using multiple linear regression with the help of SPSS version 29. The results showed that resilience significantly influenced students' mathematical problem solving abilities, while mathematical literacy did not. Simultaneously, resilience and mathematical literacy have not shown a significant influence on students' mathematical problem solving abilities. The coefficient of determination of 15.5% indicates that mathematical problem solving ability is influenced by resilience and mathematical literacy, while the remaining is influenced by other factors outside the research. Thus, resilience is a crucial factor that needs to be developed in mathematics learning to support students' mathematical problem solving abilities.

Keywords: mathematical literacy; mathematical problem solving abilities; resilience

INTRODUCTION

Mathematics is a basic science that has an important role in human life. Mathematics serves not only as a tool for numerical calculations, but also as a means to hone logical, analytical, critical, and systematic thinking skills in facing the challenges of everyday life (Desanjaya et al., 2025). Mathematical knowledge has a significant impact on life and is considered the foundation of various other fields of science. Mathematics is not only a collection of formulas and numbers, but also a tool that helps expand thinking skills (Pratiwi et al., 2024).

For example, mathematical thinking skills are necessary for financial decision-making, measurement, and simple quantitative analysis in everyday life. However, students still generally view mathematics learning in schools as an activity that prioritizes memorizing formulas over understanding their meaning and application in everyday situations (Sholehah & Listiawan, 2025). Therefore, mathematics is not merely a symbolic mechanism, but is relevant to the quality of daily life and is therefore considered essential in education.

Mathematics learning in schools primarily aims to sharpen logical skills, analytical systematic, and critical thinking skills, as well as the ability to collaborate and communicate

effectively. One of the goals of mathematics learning is to enable students to solve problems, not just solve routine problems (Sriwahyuni & Maryati, 2022). According to Rahmawati et al. (2021) mathematical problem solving skills are crucial because they constitute one of the core competencies students must possess in the mathematical thinking process.

The National Council of Teachers of Mathematics (NCTM, 2000) emphasizes that the objectives of mathematics learning include the development of five core skills: problem solving, reasoning, communication, connections, and representation (Elanda et al., 2025). Thus, learning mathematics does not only emphasize mastering formulas and solution steps, but also on developing mathematical thinking skills that can be used in everyday life.

Problem solving skills in mathematics learning are students' abilities to understand problems, design appropriate solutions, solve problems systematically, and evaluate the results. Emphasis on these skills is crucial because students who rely on memorization tend to struggle with contextual problems they have never previously practiced (Sriwahyuni & Maryati, 2022). According to Siswanto & Meiliasari (2024), problem solving skills play a crucial role in measuring the extent to which students are able to connect conceptual knowledge to real-life contexts. Thus, problem solving skills are not only the ultimate goal of learning mathematics, but also the primary means of developing logical and critical thinking skills that are greatly needed in today's modern era.

However, in reality Indonesian students' ability to solve mathematical problems is still relatively low. Many students are able to solve routine problems but struggle when faced with non-routine problems that require higher-order thinking skills. Research by Ratnasari & Safarini (2022) shows that students still struggle with holistic problem solving and have limited strategies for solving non-routine problems, particularly at the stage of transforming the problem into mathematical form.

This condition aligns with the results of the 2022 Programme for International Student Assessment (PISA) study, which placed the average mathematical literacy score of Indonesian students below the OECD average, with only a small proportion of students able to solve problems with complex thinking (OECD, 2023). Similar findings were also revealed by Kholid et al. (2022), who stated that students experience significant difficulties at the mathematization stage when working on PISA-style mathematical literacy-based problems. Based on research at various junior high school levels, problem solving abilities are still relatively low, and students tend to rely on procedural steps without a deep understanding of mathematical concepts. Lasdianto et al. (2023) revealed that junior high school students' mathematical problem solving abilities are still low. Similar findings were also presented by Ni'mah & Kusmaryono (2025), who stated that students tend to focus on procedural stages without adequate conceptual understanding. This condition aligns with the opinion of Fatwa et al. (2019 in Matondang et al., 2023), who stated that students' low mathematical literacy is partly caused by a lack of experience in critical thinking when facing problems that require reasoning and creativity.

Factors influencing students' problem solving abilities consist of internal and external factors. Internal factors include cognitive abilities, motivation, interest, self-confidence, and emotional states, which influence how students think and act when solving problems. Meanwhile, external factors include family support, teacher learning methods, the school

environment, and interactions with peers, which contribute to shaping students' experiences and strategies in solving problems (Riyanti & Surya, 2025).

One factor influencing students' mathematics learning is their level of resilience. Students with strong mathematical resilience possess the mathematical skills needed to answer exam questions, even when needed outside of the school environment, and consistently experience enjoyment when using them. This aligns with the opinion of (Azizah & Abadi, 2022), who stated that students with strong resilience, even in unfavorable situations, can still achieve success in learning mathematics at school because they will strive to do their best in learning mathematics.

In mathematics learning, the term "mathematical resilience" refers to the persistence, confidence, and optimism possessed by students when facing mathematical challenges (Tambunan, 2021). Previous research by Maulani & Ruseffendi (2019) indicates that mathematical resilience contributes to students' problem solving abilities. This finding shows that resilience is an important factor in assisting students to cope with difficulties in solving mathematical problems. Research conducted by Rahmmatiya & Miatun (2020) indicates that students with high levels of mathematical resilience demonstrate good competence in solving mathematical problems because they can follow orderly steps and have confidence in facing challenges. Meanwhile, students with moderate levels of resilience tend to lack mathematical problem solving skills because they cannot follow structured steps, are less careful, and often give up when faced with challenging problems. Therefore, developing resilience needs to be a priority in the mathematics learning process to help students face learning difficulties more resiliently and independently.

Besides resilience, another factor that plays an important role in problem solving ability is mathematical literacy. Mathematical literacy can be understood as students' skills in identifying concepts, steps, and information in mathematical logic (Mashuri et al., 2023). Malini et al. (2022) research explains that the ability to formulate and understand mathematical problems is an important part of students' mathematical literacy. According to Safrida et al. (2023), students with good mathematical literacy skills can understand, implement, and apply mathematics in their daily lives. However, in reality, mathematical literacy skills in Indonesia remain low. Based on research from the OECD through the 2018 PISA survey, Indonesia only scored 403 for literacy, while the OECD considers a good score of 494. With this literacy score, Indonesia ranked 63rd out of 72 participating countries. The literacy skill scores obtained are clearly related to each individual's abilities (Safrulloh & Desmayanasari, 2023). Good mathematical literacy plays a role in connecting conceptual understanding with real-world situations, thus supporting students in understanding problems, determining strategies, and interpreting solutions meaningfully. Based on the above description, it can be concluded that students' low mathematical problem solving abilities are influenced by various internal factors, including suboptimal levels of resilience and mathematical literacy. Therefore, research on the influence of resilience and mathematical literacy on students' mathematical problem solving abilities is important. The urgency of this research lies in the effort to understand the relationship between the affective aspect (resilience) and the cognitive aspect (mathematical literacy) on higher-order thinking skills such as mathematical problem solving. This study was designed to analyze the

influence of resilience and mathematical literacy on students' ability to solve mathematical problems.

Research on mathematical problem solving abilities generally focuses on cognitive aspects such as mathematical literacy, while affective factors like resilience are still rarely examined integratively. In fact, resilience plays an important role in helping students endure difficulties in learning mathematics and reducing the negative impact of anxiety or failure (Johnston-Wilder et al., 2014; Hutauruk & Priatna, 2017). Literature studies show a positive relationship between mathematical resilience and problem solving ability, where students with higher resilience tend to be more creative and persistent in solving problems (Hidayati & Mahmudi, 2025). However, previous studies have mostly highlighted the relationship between resilience and general academic achievement or mathematics anxiety, rather than directly with mathematical literacy. On the other hand, mathematical literacy, which has become an international focus through PISA assessments, has been proven to contribute to problem solving ability, but has not been widely studied together with affective factors such as resilience (Akkan & Horzum, 2024). Thus, there is a research gap to simultaneously examine the influence of resilience and mathematical literacy on problem solving ability, particularly in the context of education in Indonesia. The novelty of this study lies in the integration of cognitive and affective aspects within a single conceptual framework, which is expected to provide empirical contributions as well as practical recommendations for more holistic mathematics learning strategies.

The main problem in this study is how resilience and mathematical literacy influence students' mathematical problem solving abilities. Previous research has mostly emphasized cognitive aspects such as mathematical literacy, while affective factors like resilience have rarely been examined integratively. Therefore, this study seeks to answer the following questions: to what extent is students' resilience in facing difficulties in learning mathematics, how is their level of mathematical literacy in solving problem solving tasks, and whether resilience and mathematical literacy have partial as well as simultaneous effects on students' mathematical problem solving abilities.

The objectives of this study are to describe students' level of resilience in mathematics learning and their level of mathematical literacy in solving problem solving tasks. Furthermore, this study aims to analyze the influence of resilience on students' mathematical problem solving abilities, analyze the influence of mathematical literacy on problem solving abilities, and examine the simultaneous effects of resilience and mathematical literacy on students' mathematical problem solving abilities. Thus, this research is expected to provide empirical contributions as well as practical recommendations for mathematics learning strategies that are more holistic, emphasizing not only cognitive aspects but also strengthening students' affective aspects.

RESEARCH METHODS

This study used a quantitative approach with a correlational design. The study population was all seventh-grade students of SMPN 27 Tangerang City in the 2025/2026 academic year, with a sample of 36 students selected using cluster random sampling.

Research Instruments and Validation

The research instruments included a mathematical resilience questionnaire, a mathematical literacy questionnaire, and a problem solving ability test on the topic of Linear Equations in One Variable. Data was collected using three main instruments that were tested for validity and reliability. Validity was determined through expert judgment. These instruments include:

1. Resilience Questionnaire

This questionnaire measures students' persistence, self-confidence, and optimism when facing math challenges. The instrument's outline is presented in Table 1:

Table 1. Resilience Instrument Grid

No	Indicator	Statement Item Number	Statement Item	
			Positive	Negative
1	Believing that mathematics is valuable and useful to learn	2, 5, 11, 15, 16	2, 11, 15	5, 16
2	Demonstrating persistence and determination in learning mathematics despite obstacles	1, 7, 10, 13, 19	1, 13, 19	7, 10
3	Showing self-confidence in understanding mathematics and developing learning strategies	4, 6, 9, 14, 17	6, 9, 14	4, 17
4	Maintaining persistence and positive attitudes in mathematics learning	3, 8, 12, 18, 20	3, 8, 20	12, 18

2. Mathematical Literacy Questionnaire

This instrument assesses the ability to construct, implement, and understand mathematics in various situations. Details of the instrument can be seen in Table 2:

Table 2. Mathematical Literacy Instrument Grid

No	Indicator	Statement Item Number	Statement Item	
			Positive	Negative
1	Able to understand mathematical problems in various contexts of everyday life	1, 7, 9, 13, 16	1, 9, 13	7, 16
2	Able to model contextual problems into mathematical forms or models	2, 3, 8, 14, 17	3, 8, 14	2, 17
3	Able to use mathematical concepts, facts, procedures, and tools to solve problems	5, 12, 15, 18, 20	12, 15, 20	5, 18
4	Able to interpret, evaluate, and communicate the results of solving mathematical problems	4, 6, 10, 11, 19	6, 11, 19	4, 10

3. Mathematical Problem Solving Ability Test

The test instrument consists of five descriptive questions that measure students' ability to understand problems, plan solutions, implement plans, and re-check the answers to the One Variable Linear Equations material. The instrument outline is presented in Table 3.

Table 3. Mathematical Resilience and Literacy Instrument Answer Scores

Answer Options	Statement Score Weight	
	Positive	Negative
Strongly Agree	4	4
Agree	3	3
Disagree	2	2
Strongly Disagree	1	1

Data Analysis Techniques

Data analysis techniques included descriptive analysis to describe the characteristics of each variable, as well as inferential analysis to test the hypothesis. Prerequisite analysis tests conducted included normality, multicollinearity, and heteroscedasticity tests. Furthermore, hypothesis testing used multiple linear regression analysis with the help of IBM SPSS version 29 software. This analysis included a T-test (partial), F-test (simultaneous), and coefficient of determination (R^2) to determine the extent to which resilience and mathematical literacy contribute to students' problem solving abilities.

RESULTS AND DISCUSSION

Descriptive Analysis of Research Variables

As a first step in data analysis, descriptive statistics for the three variables studied are presented. Descriptive statistics of the third research variable are presented in Table 4.

Table 4. Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Resiliensi	36	42	74	63.11	6.697
Literasi Matematika	36	25	69	51.86	9.091
Kemampuan Pemecahan Masalah Matematis	36	2	80	37.42	23.178

Based on Table 4, the average resilience score was 63.11, the average mathematical literacy score was 51.86, and the average mathematical problem solving ability score was 37.42. These results indicate that students' resilience and mathematical literacy were relatively good, while their problem solving ability was still moderate.

Normality Test

A test for normality was performed to assess if the collected research data exhibited a normal distribution prior to executing the multiple linear regression analysis. This evaluation utilized the Kolmogorov-Smirnov approach with support from IBM SPSS Statistics version 29. The findings of the normality test are shown in Table 5.

Table 5. Normality Test Results

Test Method	Significance Value (Sig. 2-tailed)
Asymptotic	0.071
Monte Carlo	0.073

Referring to Table 5, the significance values obtained from both test methods exceed 0.05, which means that the research data is stated to be normally distributed.

Multicollinearity Test

A test for multicollinearity was executed to assess if there was a strong relationship between the independent variables present in the regression model. The examination involved analyzing the Tolerance and Variance Inflation Factor (VIF) values.

Table 6. Multicollinearity Test Results

Variable	Collinearity Tolerance	Statistics VIF
Resilience	0.954	1.048
Mathematical Literacy	0.954	1.048

According to Table 6, each of the independent variables displayed a tolerance value of 0.954 alongside a VIF value of 1.048. These findings demonstrate that the tolerance values exceed 0.10 and the VIF values fall under 10, indicating that there is no multicollinearity present among the independent variables. As a result, the regression model adheres to the multicollinearity assumption.

Heteroscedasticity Test

A heteroscedasticity test was done to see if the regression model's leftover variance stayed the same for every observation. Good regression models are shown by no signs of heteroscedasticity. Table 7 below shows the outcome of the heteroscedasticity test.

Table 7. Heteroscedasticity Test Results

Variable	t	Sig
Resilience	0.762	0.451
Mathematical Literacy	1.082	0.287

The significance values in Table 7, show that neither resilience nor mathematical literacy indicate heteroscedasticity.

Multiple Linear Regression Analysis

Multiple linear regression analysis was conducted to determine the effect of resilience and mathematical literacy on students' mathematical problem solving abilities. The results of the analysis are presented in Table 8.

Table 8. Results of Multiple Regression Testing between X1 and X2 with Y

Variable	Unstandardized B	Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	102.414	45.751		2.239	.032
Resilience	-1.244	.567	-.359	-2.195	.035

Mathematical Literacy	.261	.418	.102	.625	.536
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The results of multiple linear regression analysis show the equation $Y = 102.414 - 1.244X_1 + 0.261X_2$. The resilience variable has a significance value of 0.035 (<0.05), so it has a significant effect on students' mathematical problem solving abilities. Meanwhile, the mathematical literacy variable has a significance value of 0.536 (>0.05), so it does not show a significant effect. This indicates that there are other factors that are more dominant in influencing students' mathematical problem solving abilities.

Simultaneous Test (F-Test)

The F test was conducted to determine whether resilience and mathematical literacy simultaneously influence students' mathematical problem solving abilities. Table 9 shows the results of the simultaneous test.

Table 9. F Test Results

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	2922.191	2	1461.095	3.036	.062 ^b
Residual	15880.559	33	481.229		
Total	18802.750	35			

The number of samples is 36, independent variables 2 and a real level of 5%, then the F table is obtained as $(k; n-k-1) = (2; 33) = 3.28$. Based on the results of the F test, a significance value of 0.062 (> 0.05) was obtained with a calculated F of 3.036 which is smaller than the F table of 3.28. This shows that the independent variables together do not have a significant effect on the dependent variable.

Partial Test (T-Test)

The t-test was conducted to determine the partial effect of resilience and mathematical literacy on students' mathematical problem solving abilities. The results of the partial test are presented in Table 10.

Table 10. T Test Result

Variable	t	Sig.
Resilience	-2.195	.035
Literasi Matematika	.625	.536

Seen from the calculation results in table 11, the resilience variable has a significance value of 0.035 (<0.05), thus significantly influencing students' mathematical problem solving abilities. Meanwhile, the mathematical literacy variable has a significance value of 0.536 (>0.05), thus not yet showing a significant influence on students' mathematical problem solving abilities.

Coefficient of Determination (R^2)

The coefficient of determination test was conducted to determine the contribution of resilience and mathematical literacy to students' mathematical problem solving abilities. The results of the determination coefficient test are presented in Table 11.

Table 11. Results of Multiple Determination Coefficient Test

R	R Square	Adjusted R Square	Std. Error of The Estimate
0.394 ^a	0.155	0.104	21.937

Based on Table 11, the coefficient of determination ($R^2 = 0.155$) shows that the combination of resilience and mathematical literacy explains approximately 15.5% of the change in students' problem solving abilities. Approximately 84.5% of the remaining variation is driven by other variables.

The results of the study indicate that mathematical resilience significantly influences students' problem solving abilities, while mathematical literacy does not show a significant effect. The significance of resilience indicates that students' mental toughness, fighting spirit, and self-confidence are the main determining factors when they face the characteristics of non-routine algebra problems in the One Variable Linear Equation material. When encountering difficulties, resilient students do not give up easily and continue to seek alternative strategies, this supports the findings of Rahmmatiya & Miatun (2020) regarding the positive impact of emotional regulation on problem solving, and confirms the view of Azizah & Abadi (2022) that the lack of resilience can hinder thinking performance.

Conversely, the insignificance of mathematical literacy is a finding that differs from general theoretical assumptions. This is thought to occur due to a gap between contextual literacy skills and the procedural operational demands of the specific material of Linear Equations of One Variable. Students may understand the context of the problem, but experience difficulties in "mathematizing" or transforming the real situation into a formal algebraic model, a constraint also identified by Kholid et al. (2022) and Lasdianto et al. (2023). Simultaneously, the low joint contribution of the two variables (15.5%) indicates the dominance of other factors not measured in this study.

These findings imply the importance for teachers to not only hone cognitive aspects, but also integrate affective aspects such as emotional regulation and self-confidence so that students are more resilient in facing non-routine problems, as well as the need for more effective learning strategies in bridging real-world contexts to formal algebraic models. Nevertheless, this research has constraints as it concentrates solely on the topic of Linear Equations of One Variable with a limited sample group consisting of 36 students, so the level of generalizability of the results is limited. In addition, the low value of the coefficient of determination indicates the presence of other variables that have not been revealed, so future researchers are advised to expand the sample, vary the material, and include additional variables.

CONCLUSION

This study concludes that mathematical resilience has a significant positive influence on students' mathematical problem solving abilities. Students with high levels of resilience

demonstrate better persistence and confidence when facing non routine problems, specifically in Linear Equations in One Variable. Conversely, mathematical literacy does not show a significant influence on problem solving abilities in this context. This suggests a gap between students' general contextual understanding and their procedural algebraic skills. Furthermore, resilience and mathematical literacy simultaneously do not significantly affect students' mathematical problem solving abilities, with a determination coefficient of only 15.5%. These findings imply that developing affective aspects, such as resilience, is as crucial as cognitive training in mathematics education to help students overcome challenges in solving complex problems.

REFERENCES

- Akkan, S. N., & Horzum, T. (2024). Illuminating the landscape of mathematical resilience: A systematic review. *Journal of Pedagogical Research*, 8(1), 312–338. <https://doi.org/10.33902/JPR.202420093>
- Azizah, R. N., & Abadi, A. P. (2022). Kajian Pustaka: Resiliensi Siswa dalam Pembelajaran Matematika. *Jurnal Didactical Mathematics*, 4(1), 104–110. <https://doi.org/10.31949/dmj.v2i2.2074>
- Desanjaya, J., Lusiana, & Suriadi, A. (2025). Penerapan Metode Jarimatika Untuk Meningkatkan Hasil Belajar Siswa Pada Materi Perkalian di Kelas II SD Negeri 27 Talang Kelapa. *Jurnal Inovasi Pendidikan Matematika Dan IPA*, 5(2), 815–825.
- Elanda, E., Subarinah, S., & Salsabila, N. H. (2025). Analisis kemampuan representasi matematis ditinjau dari self efficacy siswa. *Mandalika Mathematics and Education Journal*, 7(3), 1210–1223. <https://doi.org/10.29303/jm.v7i3.9761>
- Hidayati, D. N., & Mahmudi, A. (2025). *Mathematical Resilience and Student Problem Solving in Mathematics Learning: Are There Any Connections?* 223–230. https://doi.org/10.2991/978-2-38476-481-5_22
- Hutauruk, A. J. B., & Priatna, N. (2017). Mathematical Resilience of Mathematics Education Students. *Journal of Physics: Conference Series*, 895(1). <https://doi.org/10.1088/1742-6596/895/1/012067>
- Kholid, M. N., Rofi'ah, F., Ishartono, N., Waluyo, M., Maharani, S., Swastika, A., Faiziyah, N., & Sari, C. K. (2022). What Are Students' Difficulties in Implementing Mathematical Literacy Skills for Solving PISA-Like Problem? *Journal of Higher Education Theory and Practice*, 22(2), 180–199.
- Lasdianto, J. R., Haerudin, & Abadi, A. P. (2023). Kemampuan Pemecahan Masalah Matematis Siswa SMP Berdasarkan Kecemasan Matematika. *Jurnal Pendidikan Matematika*, 14(1), 88–102. <https://doi.org/10.36709/jpm.v14i1.17>
- Malini, S., Rusdi, M., & Kamid. (2022). Desain Soal Pemodelan Matematika Menggunakan Konteks Toko Online Siswa Kelas X. *Jurnal PRISMA*, 11(1), 32–41. <https://doi.org/10.35194/jp.v11i1.2106>
- Mashuri, S., Kurniawan, R., & Jahring, J. (2023). Kemampuan Literasi Matematis Siswa Dalam Menyelesaikan Soal Berorientasi PISA Konten Quantity. *EDU-MAT: Jurnal Pendidikan Matematika*, 11(1), 179–189. <https://doi.org/10.20527/edumat.v11i1.15417>
- Matondang, K., Saragih, R. M. B., & Daulay, L. A. (2023). Analisis Kemampuan Literasi Matematika Siswa. *OMEGA: Jurnal Keilmuan Pendidikan Matematika*, 2(3), 142–148.

- Maulani, R. L., Ruseffendi, H. E. T., & Kustiana. (2019). Improving Students' Critical Thinking Ability and Resiliency Using Problem Solving Approach. *Jurnal PRISMA*, VIII(1), 25–35.
- Ni'mah, A., & Kusmaryono, I. (2025). Efektivitas Pembelajaran Berdiferensiasi dengan Media Stafcaps Terhadap Pemecahan Masalah Matematis dan Keaktifan Siswa. *Jurnal Ilmiah Pendidikan Citra Bakti*, 12(2), 353–367. <https://doi.org/10.38048/jipcb.v12i2.5238>
- Pratiwi, U. M., Novaliyosi, & Pujiastuti, H. (2024). Systematic Literature Review: Kemampuan Berpikir Kritis Siswa Ditinjau dari Penyelesaian Soal Literasi Numerasi. *SIGMA: Jurnal Pendidikan Matematika*, 16(2), 347–356. <https://doi.org/10.26618/sigma.v16i2.15353>
- Rahmawati, A., Lukman, H. S., & Setiani, A. (2021). Analisis Kemampuan Pemecahan Masalah Matematis Ditinjau dari Tingkat Self-Efficacy. *Jurnal Ilmiah Pendidikan Matematika*, 4(2), 79–90.
- Rahmmatiya, R., & Miatun, A. (2020). Analisis Kemampuan Pemecahan Masalah Matematis Ditinjau dari Resiliensi Matematis Siswa SMP. *Teorema: Teori Dan Riset Matematika*, 5(2), 187–202.
- Ratnasari, & Safarini, D. (2022). Common Difficulties of Eighth Grade Students When Solving Non-Routine Mathematics Problems. *Jurnal Pendidikan MIPA*, 23(1), 1–7. <https://doi.org/10.23960/jpmipa/v23i1.pp67-77>
- Riyanti, Dessy. A. Z. P., & Surya, A. (2025). Kemampuan Pemecahan Masalah Matematis Siswa Sekolah Dasar: Systematic Literature Review (SLR). *Social, Humanities, and Educational Studies SHEs: Conference Series*, 8(3), 381–389.
- Safrida, L. N., Sunardi, Suwito, A., Oktavianingtyas, E., & Rizkina, D. (2023). Literasi Matematika Siswa dalam Menyelesaikan Masalah Lingkaran Ditinjau dari Self Efficacy. *EDU-MAT: Jurnal Pendidikan Matematika*, 11(1), 1–12. <https://doi.org/10.20527/edumat.v11i1.15091>
- Safrulloh, A., & Desmayanasari, D. (2023). Analisis Kemampuan Literasi Matematis Siswa SMP. *EDU-MAT: Jurnal Pendidikan Matematika*, 11(1), 86–96. <https://doi.org/10.20527/edumat.v11i1.14940>
- Sholehah, F. L., & Listiawan, T. (2025). Probabilo Tour: Ethnomathematics-Based Learning Media to Support High School Students' Mathematical Problem Solving Skills. *Kontinu: Jurnal Penelitian Didaktik Matematika*, 9(2), 368–391.
- Siswanto, E., & Meiliasari. (2024). Kemampuan Pemecahan Masalah pada Pembelajaran Matematika: Systematic Literature Review. *JRPMS (Jurnal Riset Pembelajaran Matematika Sekolah)*, 8(1), 45–59.
- Sriwahyuni, K., & Maryati, I. (2022a). Kemampuan Pemecahan Masalah Matematis Siswa pada Materi Statistika. *Plusminus: Jurnal Pendidikan Matematika*, 2(2), 335–344.
- Sriwahyuni, K., & Maryati, I. (2022b). *Kemampuan Pemecahan Masalah Matematis Siswa pada Materi Statistika*.
- Tambunan, H. (2021). Dampak Pembelajaran Online Selama Pandemi COVID-19 Terhadap Resiliensi, Literasi Matematis dan Prestasi Matematika Siswa. *Jurnal Pendidikan Matematika Indonesia*, 6(2), 70–76.