

THE RELATIONSHIP BETWEEN NUMERICAL ABILITY, LEARNING INDEPENDENCE, AND LEARNING FACILITIES AT HOME WITH MATHEMATICS LEARNING OUTCOMES

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ABSTRACT

Mathematics learning outcomes of students correlate with many factors. Numerical ability, learning independence, and learning facilities at home are considered to correlate with learning outcomes. The purpose of this research is to know that there is a positive and significant correlation between numerical ability, learning independence, and learning facilities at home with mathematics learning outcomes for students from class VIII at State Junior High School (SMP Negeri) 4 Yogyakarta first semester in 2017/2018 school year. This research population comprises students from class VIII in the first semester at SMP Negeri 4 Yogyakarta in the 2017/2018 school year, consisting of 5 classes with 169 students. The sample is taken with random technique sampling toward class, and class VIII C consisted of 33 students. The data collection technique uses the questionnaire technique and test. Research instrumental test uses validity, reliability, and T-test. Prerequisite analysis test involves normality, independent, and linearity test. Data analysis uses correlation and regresses linear analysis. The result of this research shows that there is positive and significant correlation between numerical ability (X_1), learning independency (X_2), and learning facilities at home (X_3) with mathematics learning outcomes of students with $F_{\text{ount}} > F_{\text{table}}$ is $5,320 > 2,93$ with $R = 0,596$ and $R^2 = 0,355$ with $\hat{Y} = 9,435 + 0,312 X_1 + 0,201 X_2 + 0,281 X_3$, and $SR(X_1) = 46,856 \%$, $RC(X_2) = 18,545 \%$, and $RC(X_3) = 34,599 \%$, $EC(X_1) = 16,633 \%$, $EC(X_2) = 6,583 \%$, and $EC(X_3) = 12,282 \%$.

Keywords: Numerical Ability, Learning Independency, Learning Facilities at Home, and Mathematics Learning Outcomes.

INTRODUCTION

The world of education is always undergoing renewal to improve quality and success in the field of education. Renewal in the field of education is to implement the education components properly. To support this is very much needed the community, schools, and government's role through various programs carried out by the government and primarily implemented by schools. Schools are formal educational institutions that are responsible for providing knowledge and character. One of the scientific disciplines that are the aim of education in mathematics.

Mathematics becomes the basis of developing science at this time. According to Suherman (2003: 25), Mathematics as the queen or mother of science is intended that mathematics is as a source of other sciences. In other words, many of the sciences whose discoveries and development depend on mathematics. Therefore, mathematics is taught to students starting in elementary school. According to Abdurrahman (2003: 253), School mathematics is a field of study studied by all students from elementary to high school and college. There are many reasons for the need for students to learn mathematics. The reason for the need to study mathematics is because mathematics is: a means of logical thinking, a means for solving problems of everyday life, and a means for developing creativity. However, in reality, some VIII grade students at SMP Negeri 4 Yogyakarta did not like mathematics, so the results of learning mathematics were still low. Based on the data collection results, the poor student learning outcomes can be seen from the Odd Semester Daily Test scores in mathematics subjects that have been achieved by students. The following are the results of daily tests obtained by eighth-grade students of SMP Negeri 4 Yogyakarta, shown in Table 1.

Table 1. Daily scores for Mathematics VIII SMP Negeri 4 Yogyakarta Odd Semester 2017/2018 Academic Year

Class	VIII				
	A	B	C	D	E
Average	51,117	41,235	52,272	53,588	64,647
The highest score	80	79	82	82	96
Lowest Value	32	22	27	21	34

Based on the table above, it can be seen that the average value of daily tests in class VIII of SMP Negeri 4 Yogyakarta is still below 75.

Students' ability to learn mathematics can be measured through mathematics learning outcomes. According to Uno (2014: 16), Learning outcomes are a form of mastery of abilities or skills after students follow or experience a learning process. The results of learning mathematics show how the level of student mastery of mathematics subjects. Several factors influence the poor learning outcomes. According to Slameto (2010: 54), Factors that influence learning of many types but can be classified into two groups, namely internal factors, and external factors.

Based on interviews and observations with some students, some students consider mathematics a complicated subject. Some students' numerical ability is low, the independence of learning mathematics some students lack, and not all students have adequate learning facilities at home. Internal factors that influence learning outcomes are numerical ability. The low numerical ability can be seen from students' lack of accuracy in calculating and solving mathematical problems, especially subtraction problems with negative numbers and fraction shape division operations. According to Sukardi (1985: 166), a person's ability to count can be measured by tests that emphasize the use of reason in understanding ideas expressed in numbers and how they can think and reason with numbers. Webster's New Third International Dictionary in Naga (1980: 1) formulates that counting as a branch of mathematics about the nature and relationships of real numbers and their calculations mainly concern the addition, subtraction, multiplication, and division.

In addition to numerical ability, another internal factor that is thought to influence mathematics learning outcomes is learning independence. Someone who has the desire to learn independently means already aware of the importance of improving learning outcomes. According to Nurhayati (2011: 132), The term independence shows a belief in the self's ability to solve the problem without special assistance from others and an unwillingness to control others. According to Nurhayati (2011: 132), independence indicates the following elements: (a) responsibility, (b) self-confidence, (c) initiative, (d) having a strong motivation to advance for his good, (e) steady make their own decisions, (f) dare to bear the risk of their decisions, (g) able to solve their problems.

Lack of independence of student learning is seen when mathematics in class. Some students are still shy to ask when they do not understand the material. Students are still not confident with the answers when given training and are affected by their friends' answers. Also, some students are less severe when practicing because it has a habit of doing random questions. Some students also seem to give up easily when encountering a slightly tricky math problem.

In addition to the internal factors above, external factors that influence mathematics learning outcomes are learning facilities. The completeness of learning facilities at school and home greatly influences student learning activities. However, in this case, the discussion will be more focused on learning facilities at home. According to Slameto (2010: 63), Children who are learning besides fulfilling their basic needs, for example, eating, clothing, health protection, etc., also need learning facilities such as study rooms, desks, chairs, lighting, stationery, books, and others. Walton (2005: 155) revealed that learning is very closely related to the place. A good learning atmosphere should be created. Also, the study time must be considered, as well as possible. There must be a specific time table. It can be concluded that the characteristics of learning facilities at home are the study room, learning tools, the atmosphere in learning, and study time.

Some students said that the learning facilities in their homes were still inadequate, such as the absence of a special study room used for learning because the bedroom was also used as a place to study without tables and chairs for learning, stationery that was incomplete, the atmosphere of the house was not conducive to study, and less study time because more time is spent playing. Some students also said that they already had adequate learning facilities at home. However, the students did not make fair use of the learning facilities.

Several studies that have been conducted and are relevant to this research are the first research conducted by Permana and Sumargiyani (2014) about numerical abilities with the research title *The Relationship of Student Parents' Attention, Learning Environment in Schools, and Numerical Abilities with Learning Outcomes Mathematics of Class VII Students of Even Semester SMP Muhammadiyah 02 Sleman Regency Academic Year 2013/2014*. The second study conducted by Widiani and Khasanah (2014: 513) titled *The Relationship between Learning Independence, Family Environment, and Learning Facilities in Schools with Mathematics Learning Outcomes Grade XI Students of Muhammadiyah 1 Senior High School 1 Magelang City Academic Year 2013/2014*. Moreover, the third study conducted by Susanti (2013) about learning facilities at home with the research title *The Relationship Between Learning Facilities at Home And Mathematics Learning Independence With Mathematics Learning Outcomes Grade VIII Students of SMP Negeri 1 Sedayu, Bantul Regency, Academic Year 2012/2013*.

The first study above is quantitative. This study has one independent variable (X) relevant to researchers, namely numerical ability. It has one dependent variable (Y) relevant to researchers, namely mathematics learning outcomes. Furthermore, the second study is quantitative. This study has one independent variable (X) relevant to researchers: learning independence and has one dependent variable (Y) relevant to researchers, namely mathematics learning outcomes.

Similarly, the third study is quantitative research. This study has one independent variable (X) relevant to researchers, namely learning facilities at home and has one dependent variable (Y) relevant to researchers, namely mathematics learning outcomes. The purpose of this study is to determine whether there is a relationship between numerical ability, learning independence, and learning facilities at home with mathematics learning outcomes for students of class VIII of SMP Negeri 4 Yogyakarta Odd Semester Academic Year 2017/2018.

METHODS

This research is classified as quantitative research, used to examine specific populations or samples, sampling techniques are generally carried out randomly, and data collection uses research instruments. The following research design is shown in Figure 1.

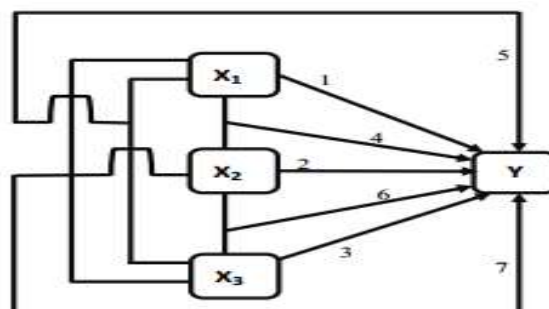


Figure 1. Research Design X_1 , X_2 , X_3 , and Y

The place of research was carried out at SMP Negeri 4 Yogyakarta. Simultaneously, the study's time was conducted in August Odd Semester Academic Year 2017/2018. This study's population were all students of class VIII odd semester of SMP Negeri 4 Yogyakarta consisting of 5 classes containing 169 students. The sampling technique in this study used random sampling techniques to the class. It is said random. The sampling class is done randomly from the existing class because the class's preparation is random. The sample class taken is class VIII C, with 33 students.

In this study, four variables are consisting of three independent variables, namely numerical ability (X_1), learning independence (X_2), and learning facilities at home (X_3), and one dependent variable, namely mathematics learning outcomes (Y). Data collection techniques used questionnaires and test methods. In this study, the questionnaire method was used to obtain data on learning independence and learning facilities at home. The test method is used to obtain numerical ability data and mathematics learning outcomes of eighth-grade students at SMP Negeri 4 Yogyakarta.

In this study, the class taken as a test class was class VIII B, with 34 students. This study's trial questionnaire instrument used a validity test by reviewers and a reliability test using the alpha formula (Arikunto, 2012: 122-123). Meanwhile, the test instrument uses a validity test with the product-moment correlation formula (Sugiyono, 2015: 255), a different power test with a discrimination index formula (Arikunto, 2012: 232), and a reliability test using the KR-20 formula (Arikunto, 2012: 115). After the data has been collected, descriptive data analysis and analysis, prerequisite tests are carried out. Descriptive data analysis is to determine the grouping of high, medium, and low student data. For the analysis, prerequisite tests must be met, namely the normality test, independent test, and linearity test, meanwhile, for data analysis using correlation analysis and linear regression analysis.

RESULTS AND DISCUSSION

The eighth-grade students of SMP Negeri 4 Yogyakarta's numerical ability in the odd semester of the academic year 2017/2018 are included in the medium category because the highest frequency lies in the interval $48.883 \leq x \leq 70.875$, which is as many as 19 students or 57.576%. Full results can be seen in table 2. As follows:

Table 2. Distribution of Number of Students by Category on Numerical Ability

Category	Score	F	%
High	$X > 70,875$	5	15,152
Is	$48,883 \leq X \leq 70,875$	19	57,576
Low	$X < 48,883$	9	27,273
	Total	33	100

Learning independence of VIII grade students of SMP Negeri 4 Yogyakarta in the odd semester of the academic year 2017/2018 is included in the medium category. The most significant frequency lies in the interval of $59,634 \leq x \leq 78,456$, namely 24 students or 72.727%. Full results can be seen in table 3. As follows:

Table 3. Distribution of the Number of Students by Category on Learning Independence

Category	Score	F	%
High	$X > 78,456$	6	18,182
Is	$59,634 \leq X \leq 78,456$	24	72,727
Low	$X < 59,634$	3	9,091
	Total	33	100

Learning facilities at the home of eighth-grade students of SMP Negeri 4 Yogyakarta in the odd semester of the academic year 2017/2018 are included in the medium category because the highest frequency is located at intervals of $56.457 \leq x \leq 75.665$, namely as many as 20 students or 60.606%. The complete results can be seen in table 4. As follows:

Table 4. Distribution of Number of Students by Category in Learning Facilities at Home

Category	Score	F	%
High	$X > 75,665$	4	12,121
Is	$56,457 \leq X \leq 75,665$	20	60,606
Low	$X < 56,457$	9	27,273
	Total	33	100

Mathematics learning outcomes of VIII grade students of SMP Negeri 4 Yogyakarta in the odd semester of the academic year 2017/2018 are included in the medium category because the most significant frequency lies in the interval $53.111 \leq x \leq 72.617$, namely 17 students or 51.515%. Full results can be seen in table 5. As follows:

Table 5. Distribution of Number of Students by Categories on Mathematical Learning Outcomes

Category	Skor	F	%
High	$X > 72,617$	7	21,212
Medium	$53,111 \leq X \leq 72,617$	17	51,515
Low	$X < 53,111$	9	27,273
	Total	33	100

The normality test found that the numerical ability variables, learning independence, learning facilities at home, and mathematics learning outcomes were usually distributed. The normality test results for the four variables can be seen in Table 6.

Table 6. Normality Test Results

No	Variable	χ^2_{count}	df	χ^2_{table}	Info.
1	Numerical Ability (X_1)	6,311	4	9,488	Normal
2	Independence Learning (X_2)	4,894	4	9,488	Normal
3	Home Learning Facilities (X_3)	6,389	3	7,815	Normal
4	Mathematical Learning Outcomes	6,798	3	7,815	Normal

Based on the independent test, it was found that the numerical ability variable with the learning independence variable, the numerical ability variable with the learning facility variable at home, and the learning independence variable with the learning facility variable at home was independent. The results of independent tests can be seen in Table 7.

Table 7. Independent Test Results

No	Variable	χ^2_{count}	df	χ^2_{table}	Info.
1	(X_1) to (X_2)	34,25	25	37,653	Independen
2	(X_1) to (X_3)	33,257	25	37,653	Independen
3	(X_2) to (X_3)	29,053	25	37,653	Independen

Based on the linearity test, it was found that the interest in learning with the results of learning mathematics, learning independence with the results of learning mathematics, and learning facilities at home with the results of learning linear mathematics. The results of the linearity test can be seen in Table 8.

Table 8. Linearity Test Results

No	Variable	F^2_{count}	df (v_1, v_2)	F^2_{table}	Info.
1	(X_1) and Y	1,892	(7,24)	2,42	Independent
2	(X_2) and Y	0,879	(9,22)	2,32	Independent
3	(X_3) and Y	1,415	(16,15)	2,38	Independent

Hypothesis Test Results:

- The first hypothesis test results are $t_{\text{count}} > t_{\text{table}}$ or $2.797 > 1.696$, then $H_{0.1}$ is rejected, and $H_{1.1}$ is accepted, which means there is a positive and significant relationship between numerical ability and mathematics learning outcomes of VIII grade students of SMP Negeri 4 Yogyakarta Odd Semester Academic Year 2017 / 2018.
- The second hypothesis test results are $t_{\text{count}} > t_{\text{table}}$ or $2.228 > 1.696$, then $H_{0.2}$ is rejected, and $H_{1.2}$ is accepted, which means there is a positive and significant relationship between learning

independence with mathematics learning outcomes of VIII grade students of SMP Negeri 4 Yogyakarta in the Odd Semester of Academic Year 2017 / 2018.

- c. The third hypothesis test results are $t_{\text{count}} > t_{\text{table}}$ or $2.441 > 1.696$ then $H_{0,3}$ is rejected, and $H_{1,3}$ is accepted, which means there is a positive and significant relationship between learning facilities at home with mathematics learning outcomes of VIII grade students of SMP Negeri 4 Yogyakarta Odd Semester Academic Year 2017/2018.
- d. The fourth hypothesis test results are $F_{\text{count}} > F_{\text{table}}$ or $5.393 > 3.32$ then $H_{0,4}$ is rejected, and $H_{1,4}$ is accepted, which means there is a positive and significant relationship between numerical ability and learning independence with mathematics learning outcomes of students of class VIII of SMP Negeri 4 Yogyakarta Semester Odd 2017/2018 Academic Year.
- e. The results of the fifth hypothesis test are $F_{\text{count}} > F_{\text{table}}$ or $6.186 > 3.32$ then $H_{0,5}$ is rejected, and $H_{1,5}$ is accepted, which means there is a positive and significant relationship between numerical ability and learning facilities at home with mathematics learning outcomes of VIII grade students of SMP Negeri 4 Yogyakarta Odd Semester Academic Year 2017/2018.
- f. The results of the sixth hypothesis test are $F_{\text{count}} > F_{\text{table}}$ or $4.458 > 3.32$ then $H_{0,6}$ is rejected, and $H_{1,6}$ is accepted, which means there is a positive and significant relationship between learning independence and learning facilities at home with mathematics learning outcomes of VIII grade students of SMP Negeri 4 Yogyakarta Odd Semester Academic Year 2017/2018.
- g. The seventh hypothesis test results are $F_{\text{count}} > F_{\text{table}}$ or $4.559 > 2.93$ then $H_{0,7}$ is rejected, and $H_{1,7}$ is accepted, which means there is a positive and significant relationship between numerical ability, learning independence, and learning facilities at home with mathematics learning outcomes of class students VIII SMP Negeri 4 Yogyakarta Odd Semester Academic Year 2017/2018.

The results showed that there was a positive and significant relationship between numerical ability and mathematics learning outcomes, with a simple correlation coefficient $R = 0.449$ and the results of $t_{\text{count}} = 2,797$ while t_{table} at a significant level of 5% with $df = 31$ that is equal to 1.696 then obtained $t_{\text{count}} > t_{\text{table}}$ or $2.797 > 1.696$. This can be explained through the linear relationship $\hat{Y} = 33,543 + 0,448 X_1$. Each increase of one unit X_1 results in a 0.448 increase in Y . In other words, if the numerical ability of students to mathematics is high, it will have a positive impact on mathematics learning outcomes. From the results of this calculation, it can be seen that student mathematics learning outcomes will be even better by increasing numerical ability and vice versa.

The results showed that there was a positive and significant relationship of learning independence with mathematics learning outcomes, with a simple correlation coefficient $R = 0.345$ and the results of $t_{\text{count}} = 2.228$ while t_{table} at a significant level of 5% with $df = 31$ which was 1.696 then obtained $t_{\text{count}} > t_{\text{table}}$ or $2.228 > 1.696$. This can be explained through the linear relationship $\hat{Y} = 26,805 + 0,481 X_2$. Every increase of one unit X_2 results in a 0.481 increase in Y ; in other words, if students' independence in learning mathematics is high, it will have a positive impact on mathematics learning outcomes. From the results of these calculations, it can be seen that student mathematics learning outcomes will be even better by increasing learning independence and vice versa.

The results showed a positive and significant relationship of learning facilities at home with mathematics learning outcomes. A simple correlation coefficient $R = 0.402$ and the results of $t_{\text{count}} = 2.441$.In contrast, t_{table} at a significant level of 5% with $df = 31$ that is equal to 1.696 then obtained $t_{\text{count}} > t_{\text{table}}$ or $2.441 > 1.696$. This can be explained through the linear relationship $\hat{Y} = 30,065 + 0,445 X_3$. Every increase of one unit of X_3 results in a 0.445 increase of Y ; in other words, if the learning facilities at home are adequate, it will positively impact the results of mathematics learning. From the results of this calculation, it can be seen that providing adequate learning facilities at home for learning, student mathematics learning outcomes will be even better, and vice versa.

The results showed a positive and significant relationship of numerical ability and learning independence with mathematics learning outcomes, with multiple correlation coefficients $R = 0.514$ and $R^2 = 0.264$ and obtained $F_{\text{count}} = 5,393$ while $F_{\text{table}} = 3,32$ at a significant level of 5% with degrees of freedom (df) the numerator ($v_1 = k = 2$) and the denominator ($v_2 = nk - 1 = 33 - 2 - 1 =$

30). So we get $F_{\text{count}} > F_{\text{table}}$ or $5.393 > 3.32$. This can be explained through the linear relationship $\hat{Y} = 14,934 + 0,365 X_1 + 0,335 X_2$. Meanwhile, for X_1 relative contributions amounted to 62.111% and X_2 amounted to 37.889%, and X_1 effective contributions amounted to 16.426%, and X_2 effective contributions amounted to 10,020%. Every increase of one unit X_1 results in a 0.365 increase in Y , and every increase in one unit X_2 results in a 0.335 increase in Y . If numerical ability and learning independence are high, it will have a positive impact on mathematics learning outcomes. From the results of these calculations, it can be seen that by increasing numerical ability and independence of learning, student mathematics learning outcomes will be even better, and vice versa.

The results showed a positive and significant relationship of numerical ability and learning facilities at home with mathematics learning outcomes, with multiple correlation coefficients $R = 0.540$ and $R^2 = 0.292$ and obtained $F_{\text{count}} = 6,186$ while $F_{\text{table}} = 3,32$ at significant level 5 % with degrees of freedom (df) numerator ($v_1 = k = 2$) and denominator ($v_2 = nk - 1 = 33 - 2 - 1 = 30$). So that obtained $F_{\text{count}} > F_{\text{table}}$ or $6.186 > 3.32$. This can be explained through the linear relationship $\hat{Y} = 14,887 + 0,372 X_1 + 0,351 X_3$. Meanwhile, for the relative contribution of X_1 by 57.336% and X_3 by 42.664% and the effective contribution of X_1 by 16.741% and the effective contribution of X_3 by 12.456%. Every increase of one unit X_1 results in a 0.372 increase in Y , and every increase in one unit X_3 results in a 0.351 increase in Y . In other words, if a numerical ability is high and the availability of adequate learning facilities at home, it will have a positive impact on mathematics learning outcomes. From the results of these calculations, it can be seen that by increasing numerical ability and completing learning facilities at home, student mathematics learning outcomes will be even better, and vice versa.

The results showed a positive and significant relationship of learning independence and learning facilities at home with mathematics learning outcomes, with multiple correlation coefficients $R = 0.479$ and $R^2 = 0.229$ and obtained $F_{\text{count}} = 4,458$ while $F_{\text{table}} = 3,32$ at significant level 5 % with degrees of freedom (df) numerator ($v_1 = k = 2$) and denominator ($v_2 = nk - 1 = 33 - 2 - 1 = 30$). So we get $F_{\text{count}} > F_{\text{table}}$ or $4.458 > 3.32$. This can be explained through the linear relationship $\hat{Y} = 12,718 + 0,350 X_2 + 0,351 X_3$. Meanwhile, for the relative contribution of X_2 by 45.712% and X_3 by 54.288% and the effective contribution of X_2 by 10.473% and the effective contribution of X_3 by 12.437%. Every increase of one unit X_2 results in a 0.350 increase in Y , and every increase in one unit X_3 results in a 0.351 increase in Y . In other words, if high learning independence and the availability of adequate learning facilities at home will positively impact mathematics learning outcomes. From the results of this calculation, it can be seen that by increasing the independence of learning and completing learning facilities at home, student mathematics learning outcomes will be even better, and vice versa.

The results showed a positive and significant relationship of numerical ability, learning independence and learning facilities at home with mathematics learning outcomes, with multiple correlation coefficients $R = 0.568$ and $R^2 = 0.322$ with $F_{\text{count}} = 4,599$ while $F_{\text{table}} = 2,93$ at the level of significant 5% with degrees of freedom (DK) numerator ($v_1 = k = 3$) and denominator ($v_2 = nk - 1 = 33 - 3 - 1 = 29$). So we get $F_{\text{count}} > F_{\text{table}}$ or $4,599 > 2,93$. This can be explained through the linear relationship $\hat{Y} = 4,807 + 0,325 X_1 + 0,242 X_2 + 0,293 X_3$. This means that each increase of one unit X_1 results in a 0.325 increase in Y , every increase in one unit X_2 results in a 0.242 increase in Y , and every increase in one unit X_3 results in a 0.293 increase in Y . While the relative contribution of X_1 is 45,348%, the relative contribution of X_2 is 22,478%, and the contribution X_3 relative to 32.174%. Effective contribution X_1 is 14.619%, effective contribution X_2 is 7.246%, and effective contribution X_3 is 10.372%.

The numerical ability variable (X_1) gives the most significant contribution compared to learning independence (X_2) and home learning facilities (X_3), namely the relative contribution of X_1 by 45.384% and the effective contribution of X_1 by 14.619%. The study results are by Permana, Eka Galuh, and Sumargiyani (2014), which shows that the relative contribution of numerical ability is 41.12%. The effective contribution of 13.86% is the most significant compared to students' parents' attention and the school's learning environment.

From the results of the discussion above, it can be concluded that numerical ability is a factor that significantly influences mathematics learning outcomes, and based on test calculations, it can be concluded that the indicator determining the results of mixed operations is one of the numerical ability indicators that gets the highest score compared to other numerical ability indicators.

Every increase in one unit X_1 results in a 0,325 increase in Y. Every increase in one unit X_2 results in a 0,242 increase in Y; every increase in one unit X_3 results in a 0,293 increase in Y. From the results of this calculation, it can be seen that by increasing numerical ability and independence of learning and learning facilities inadequate house as a means of learning, student mathematics learning outcomes will be even better, and vice versa.

CONCLUSION

Based on the results of research and discussion as described above, it can be concluded that there is a positive and significant relationship between numerical ability, learning independence, and learning facilities at home with mathematics learning outcomes of VIII grade students of SMP Negeri 4 Yogyakarta Odd Semester 2017 / Academic Year 2018.

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