MATHEMATICS ACHIEVEMENT OF FIFTH GRADER IN MYAGDI DISTRICT

THESIS SUBMITTED BY

LOK NATH BARAL

FOR PARTIAL FULFILLMENT FOR THE REQUIREMENT FOR THE DEGREE OF MASTER OF EDUCATION

SUBMITTED TO

DEPARTMENT OF MATHEMATICS EDUCATION

SAPTAGANDAKI MULTIPLE CAMPUS

BHARATPUR, CHITWAN

TRIBHUVAN UNIVERSITY

2016

CERTIFICATE

This is to certify that Mr. Lok Nath Baral, a student of academic year 2067/068 with example Roll No. 2400274 and with T.U. Registration Number 9-2-240-390-2006 has completed his thesis under my supervision for the period prescribed by the rules and regulation of Tribhuvan University, Nepal. The thesis " Mathematics Achievement of Fifth Grader in Myagdi District" embodies the results of his investigation conducted under the department of mathematics education, Bharatpur, Chitwan. I recommended for education as the partial requirements of award the Degree of Master of Education.

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Thesis Submitted

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Entitled

"A study on Mathematics Achievement of Grade Five Student of Myagdi District has been approved in partial fulfillment of the requirement Degree of Masters of Education."

Committee for the Viva-Voce

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ACKNOWLEDGEMENTS

First of all, I would like to express my sincere gratitude and gratefulness to Mr. Rudra Chalise, the member of the subject committee of Mathematics Education Saptagandaki Multiple Campus Bharatpur, Chitwan who is my teacher as well as research guide, provided me with all sorts of ideas, techniques and materials essentials for carrying out this research work from the very beginning to the end and enabled me to present this dissertation in this form.

My sincere gratitude also goes to Mr. Mani Raj Mahato, the head of the department of mathematics Education Bharatpur, Chitwan for his invaluable suggestions that lead me to carry out this research work successfully.

I am very much grateful to the headmasters and mathematics teachers of sample schools for their students for their active participation in achievement test conducted by the researcher during the period of data collection.

At the end, I wish to thank all of my friends, who assisted me in completing this study and my dear wife Sarita Baral (Gautam) for her constant inspirations in completing this study. I shall ever remain indebted and grateful to Bashu Ghimire, City Cyber Beni, Myagdi for its effort in typing this thesis even in a small, details and difficult figures and graphs relevant to the study.

……

Lok Nath Baral

ABSTRACT

The study of design is survey design. The prime concern of this study was to find out the difference on the students achievement in mathematics of grade five. To obtain the goal researcher made Null hypothesis and subject to the empirical verification.

The researcher develops achievement test for grade five according to mathematics curriculum. In order to finalize the tools, pilot study of the test was conducted. There were altogether 66 items for pilot test. After the pilot test the researcher analyzes it, then, the researcher conduct the final test. In the final test the researcher asks 50 test items and they were given sixty minute time.

An achievement test was administered to 120 students of the school included in the sample from the urban and rural areas of government school of Myagdi District. The two tailed Z-test of 0.05 level of significance was applied in order to ascertain the difference among the schools statistically and found that there is a significance difference in the achievement between urban and rural students.

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P	- Item difficulty level
D	- Discrimination Index
(σ)	- Standard Deviation
N	- Number of Students
H0	- Null Hypothesis
H1	- Alternative Hypothesis
√	- Tick on correct Answer
%	- Percentage
$\bar{x}$	- Mean

Chapter-I

INTRODUCTION

General Background

Mathematics education has been accepted as an important component of general education system from early quadrivism to modern 21th century education system. According to Traverse and Olins "Ever since of the school ancient Greek over 2000 years ago mathematics has been a key subject in curriculum. The four liberal arts & the quadrivism consisting of arithmetic, geometry, astronomy & music were basically mathematical studies."

In Nepal, significant in the field of education have taken place with the introduction of multiparty democracy in 1990 A.D. The national education commission 1992 recommended that the school curriculum should be revised in the contest of recent political change & needs of the society to meet the demands of the modern days. Now a new revised mathematics curriculum has already been introduced in the primary level of Nepal. Some new topic such as sets, number, coordinate, statistics bearing & scale drawing are being in co-operated in the curriculum of primary level.

Achievement of students in mathematics plays a vital role in teaching & learning of the subjects. In school, teacher conducts class test to motivate & stimulate the students for effective learning where students' outcomes are assessed. It is essential for productive teaching & for dealing fairly with pupils in consideration of their capabilities. This can be assessed only when the measuring instrument is reliable, valid & free from bias.

Mathematics is necessary for civilization and it directly associated with human life. It is believed that development with human life. It is believed that development of mathematics and the development of human civilization go together. To know the number of animals and the number of people their community, they developed the counting system. For this purpose, they need the mathematics and used counting system to get information about population of a state, shape size, distance and time (Pandit, 1998). CERID (1980) further reported that there was a great difference between achievement boys and girls.

Hyde, Fennema and Lamon (1980) conducted a Meta analysis of 100 students on "gender difference in mathematics performances" and conducted that gender differences in

mathematics performance was low. An examination of age trends indicated that girls showed a slight superiority in competition in elementary or middle school. They found no gender differences in problem solving in elementary of middle school but different favoring bys emerged in high school and in college.

The evaluation system in Nepal before the implementation of National Education System Plan (1971-76, NESP) was not effective and it had encouraged quantitative aspect of education rather qualitative aspect.

A good education system plays a vital role for the qualitative improvement of education system. It does not only asses the standing position of the pupils in a particular subject area, but also provides teacher. So, evaluation is an integrate part of education system. It is not a separate entity to the teaching learning program. The reliable and an appropriate evaluation technique can give the true assessment of the capabilities of the students. According to the National Education Commission (1992), "Every level of evaluation system reveals what and how the teachers teach, what's the nature of the learning activities of the student is & how objectives the selection of students in the order of the merit is. Hence, it should be taken as a year long continuous aspect of the educational activity which both regular and positive. The best course to follow to this end would be to carry out monthly bi-monthly, quarterly tests."

The release and an appropriate education technique can be the assessment of the capacities of the students. According to NESP (1971-76), "Steers will be laid on do using questions in such a way that they might provide examines in the subjects in questions. Standardized test will be developed for subjects that are arnenable to such a procedure."

Nepalese schools conduct tri-monthly, half-yearly and yearly examination to measure the achievements of the students through teacher made test but no efforts have seen made in the direction of development of standardize test. Although the more emphasis was given to the standardized achievement test (SAT) for the true assessment of the capabilities of students.

Introduction of Research Area

The problem of the study is student's achievement in mathematics of grade five students of Myagdi district. According to district education office Myagdi, there are 44

secondary level schools, 41 lower secondary level schools and 164 primary schools in Myagdi district.

"Mathematics, like language is a basic tool of communicate daily transactions and communication involve the frequent life of mathematical concepts. It is quite nature that mathematics is given a very important place, second to language in school education." NESP mathematics curriculum(1971). In the study in grade three, 25 dropouts after fourth grade, 41 appear in lower secondary examination and with about 15 pass in the examination. According to the statics, ministry of education statics division 1976/79, in addition to 21.5 percent of grade three, 16.95 percent of grade four, 24.6 percent of grade five and 21.4 percent of grade six students have repeated class due to failure or dropout. In this circumstance, the large number of the failure in the examination is the serious for the developing the country like Nepal. It is wastage of time, money, labor etc and has a negative impact not only up on the students but also on the guardians, teachers school management committee as well as education policy makers. This happened as there is no mechanism to ensure uniformity in the standard of education even though the educational objectives curricula and text books were the same nationwide. Since there is no fixed uniform standards individuals school set their own standards which very considerably. Thus there is an urgent need for each teacher to determine the level of educational development of their pupils in the national context.

Government of Nepal implemented the lower secondary curriculum 1994 to make the mathematical education more practical and useful for the contemporary societies as suggested by National Education Commission 1992. It is not sufficient only implementing of the new curriculum but there should evaluation for the determination of effectiveness of educational goals. Among the various types of the evaluating system, student's achievement test is once. It helps not only their achievement in the subject area but also gives the important information about their strong and weak area of mathematical concept which may be crucial tool for the curriculum developer, text book, writer, teacher trainers and teachers. But the tools which will be used must be reliable and valid., In our contest, there is no mechanism to ensure uniformity in the standard of education because of the individual teacher used the self made test to measure the students' performance in the subject area in their own students. This reason might be the lack of concept of standardized test in the school teacher.

Statement of the Problem

This study is concerned to measure the achievement of grade five students in mathematics. Specially, the study tries to answer the following questions:

1. Does the achievement differ among the urban & rural grade five students on mathematics in Myagdi district?
2. Does the sex affect in achievement of mathematics?

Objectives of the Study

The objectives of the study are as follows:

1. to compare the achievement in mathematics of grade five students in urban and rural area of Myagdi district.
2. To compare the achievement of boys and girls in mathematics.

Statements of the Research Hypothesis

The research hypothesis formulated for the students are as follows:

H_o 1: Is there significant difference between the achievement of mathematics of grade five students of urban and rural area of Myagdi district.

H_o 2: Is there significant difference in the achievement of boys & girls in mathematics.

Statements of Statistical Hypothesis

In order to test the hypothesis the researcher translated it in the statistical hypothesis are as follows:

a. $H_o : H_1 = H_2$ (Null Hypothesis)

   $H_o : H_1 = H_2$ (Alternative Hypothesis)

Where H_1 and H_2 are due parametric means of the achievement or urban and rural student of mathematical respectively.

b. $H_o : H_3 = H_4$ (Null Hypothesis)

$H_1 : H_3 = H_4$ (Alternative Hypothesis)

Where H_3 and H_4 are due to parametric means of the achievement of boys and girls students in mathematics.

Significance of the Study

Mathematics has become a significant place at all level of school education in Nepalese education system. Mathematics is teaching from primary level to secondary level as a compulsory subject.

General significance of this study has mentioned below:-

1. This helps to compare the achievement level of students in coming years.
2. Provide information to the concerned persons, agencies and government about the level of mathematics achievement of grade five students of Myagdi district.
3. Provided hints to the administrators a mathematics teacher of Myagdi district in improving the achievement and competency level of students in mathematics.
4. This research would be useful for the students who are interested to do since types of study work in this area.
5. This study signifies a necessity of rethinking on the mode of the instructions of mathematics education to promote and enhance the achievement level.

Mathematics has played a significant role at the school level in Nepal. This subject has been teaching from primary to secondary level as a compulsory subject. This study is a small effort in the field of mathematics teaching and learning. This study tries to compare the achievement of the students of class five in mathematics in terms of urban Vs rural and sex i.e. boys Vs girls.

This study will be helpful to the students, teachers, text book writers, teacher trainers, curriculum designers and those who are interested to conduct the research in mathematics especially on the achievement basis. This is to say that the findings of the research will

certainly be very significant to all those who are directly or indirectly involved in teaching and learning mathematics in Nepal.

Delimitation of the Study

This study is based the following limitations:

1. The population of the study in limited only in Myagdi district of Nepal.
2. This study was limited only to those students who were passed class five in Academic year 2014/2015.
3. This study based on achievement of grade five students of Myagdi district.
4. Only thirty nine secondary government schools of Myagdi district were included in this study.
5. Some of the variable like classroom situation, age group, socioeconomic status and experience of teachers' weren't controlled.

Related terms used in the Present Study Achievement

In the study, achievement is the score obtained by the grade five students of Myagdi in mathematics. Achievement in this study is different in terms of the score obtained by students on an achievement test in mathematics as prescribed mathematics curriculum.

Curriculum:

Curriculum is the total efforts of the school to bring about direct outcomes in school and out of school situation. In this study the world curriculum refers to the lower secondary mathematics curriculum prescribed by ministry of education for grade five.

Government school:

School which use curriculum and text book prescribed by ministry of education and financially supported by the government are known as government school. In this research the word government school general schools are alternatively used in this study.

Students:

The students in this study refer to those who have been passed the five grade examination conducted by the schools are admitted at six grade in general schools at Myagdi district. The world students/pupils are alternatively used in this study.

Item Analysis:

Item analysis is the process of making final test from pilot text.

Sex:

In this study, the word sex represents boys and girls.

Chapter-II

REVIEW OF RELATED LITERATURE

Theoretical Literature

Empirical literature several types of related literature reviewed in course of this study. The review of related literature helped to make the concept clear for the study and also directed to analyze and interpret the data. It provides to the researcher in a particular research to answer the question what the related studies have been carried out so far. In fact the survey of the related studies provides direction to the researcher to make his problem more realistic, precise, meaningful and researchable.

In this chapter, the researcher will try to review the previous researches about the procedure of development of standardized test and its implication o the achievement. The researcher attempts to review the research studies and literature in the area of mathematics achievement which are listed below.

The first international mathematics study (1964) and second international mathematics study (1981-1982): Introducing 2091 Japanese students 6858 American students in five levels shows that mathematics performance of Japanese students was better than that of American students.

AIKEN (1970) conducted a study on sex difference in mathematics achievement and show that boys were superior to girls in arithmetic reasoning spatial abilities and problem solving and girls were superior in verbal ability, arithmetic fundamentals and role learning.

CERID (1980) - further reported that there was a great difference between achievement of boys and girls.

HARIS AND CARITON (1992) - conducted that male student performances has been better on geometry item and female student performance has better on miscellaneous and arithmetic Item conducted the study on topic "Pattern of Gender Difference items on the scholastic attitude text."

NEUPANE (2001) - In this study on the achievement of grade IX students on the unit function of Kathmandu district found the mean achievement of private school was significantly higher than that of public schools.

SINGH (2007) - In this study on the achievement of grade X students of the topic probability in Sarlahi district conducted that the mean achievement of boys school was significantly higher than that of girls.

SHRESTHA (1991) - Studied whether the sex difference exists in mathematics achievement among 9^{th} grade students of Gorkha district. The findings of the study showed that boys were superior in every respect than that of girls in terms of the level of mathematics both boys and girls achievement was relatively poor in application rather that computation and understanding.

RAO AND LATHA (1995) - 'Achievement in mathematics' consisting of 200 intermediate students from residential and non-residential college giving equal weight age to boys and girls in Guntur district of Andra Pradesh showed that achievement of the students studying in residential college was higher than the students studying in non-residential college.

EDSC (1999) - Conducted that boys and girls were different in term of their performance in mathematics and boys were better performance than girls, the performance of student's of urban areas as significantly superior to the performance of students from rural areas.

EDSC (1999) - Conducted a research and found out that boy and girls were different in terms of their performance in mathematics. And boys were better than girls, He also found that the performance of students from urban area is better than student's from rural areas.

HANNA (1986) - Conducted a study in sex difference in Mathematics achievement of Canadian students of grade five data from the second international mathematics in the five areas arithmetic, algebra, probability, statistics, geometry & measurement and showed that no significant different in performance of boys and girls on the arithmetic algebra and probability. For the geometry and measurement the boys performance was found higher than that of the girls. So the demand of this study is supposed to be those factors which exactly fulfill the objectives.

From the above review of the related literature it has been found that similar study has been under taken in Nepal, different part of the country but not in Myagdi district. The researcher tried to accomplish this small effort, "Mathematics achievement of Fifth Grader in Myagdi district" dues to there is no single effort on this title which is very essential and important in mathematics.

Conceptual Framework

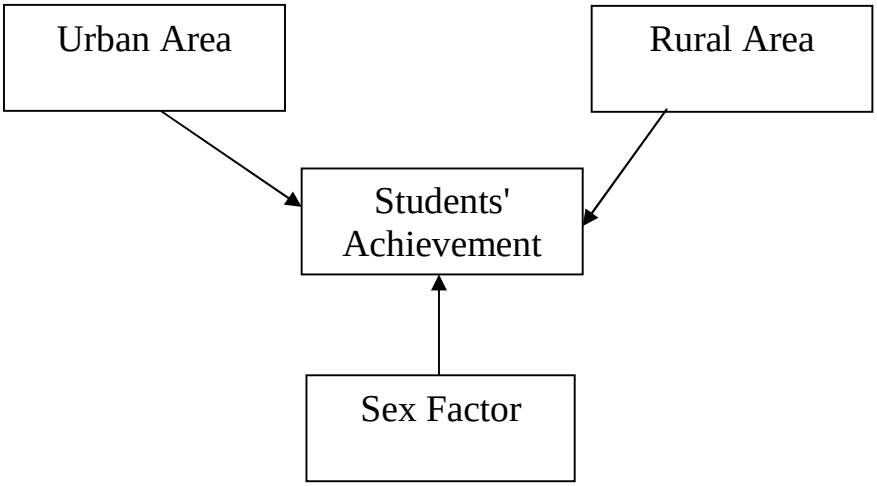
This section deals about conceptual framework of the research. It deals about researcher's own concept to conduct the research in an original way.

The concepts framework is based on the research topic, possible areas to fulfill objective and conceptual framework since the study topic is "A study on mathematical achievement of grade five students."

The response given by respondents are supposed to be fallen under the following areas:

Diagram of conceptual framework of the study

Figure No. 1



Chapter-III

METHOD AND PROCEDURE

Research methodology is a scientific process which determines how the research becomes systematic and computes. Research methodology doesn't mean only collect information but also means the case of appropriate research methods. It is a useful bridge to solve research problems in a systematic way.

The study was based on a comparative study of achievement of five grade of general school in mathematical. The chapter presents the details o0f the procedure used in this study. The following sections are described and discussed in this chapter.

Design of the study

Research design is the conceptual structure with in which research based on the survey design, the survey design should be used where the population is too large.

Population of the study

The population of the study consists of all students who passed the grade five from government school of Myagdi district in the academic year 2014/2015.

Sample of the study

The school sample

The school sample for the study was six general schools of Myagdi district. These sample schools were selected on the basis of urban and rural schools which were selected randomly from the schools of Myagdi district.

The sample of the students

The student's samples are randomly selected from the sample school of Myagdi district. The researcher selected 60/60 thus 120 students randomly from each sample school within urban and rural area. The researcher has selected 35 boys and 25 girls from rural area and 25 boys and 35 girls from the urban sample schools. The distribution of students from urban and rural areas schools has been shown in the table.

Table 1

Region	Name of schools	Boys	Girls	Total
Urban	Shree Sarbodaya Higher Secondary School, Bhurung Tatopani-9, Myagdi	10	12	22
	Shree Gyan Prakash Higher Secondary School, Dana, Myagdi	8	11	19
	Shree Paudwar Secondary School, Paudwar, Myagdi	7	12	19
Rural	Shree Prabha Secondary School, Narchyang-3, Myagdi	14	8	22
	Shree Raghu Ganga Secondary School, Rakhu Piple, Myagdi	17	10	27
	Shree Amar Secondary School, Chimkhola, Myagdi	4	7	11
	Total	60	60	120

Tools

Achievement Test

For this study, the researcher used the achievement test as a main tool. The researcher constructed an achievement test paper with the help of prescribed curriculum and teacher's guidance consisting of all multiple choice items covering the content of five grade mathematics the researcher include 66 items in the beginning while the researcher conducted pilot test. After the pilot test the researcher determined 50 test items for final test.

Piloting of the Test

For the improvement of test, the researcher carried out the pilot test. Eleven students of Shree Prabha Secondary School, Narchyang-3, Myagdi were used for pilot test. Before administering the test paper, the researcher instruct the students as how to respond the test paper, 75 minute was calculated.

Scoring of the Test

After given the final test, the researcher collected all the test papers and check with marks 180 for correct and incorrect answer respectively. The full mark for the final test was 50. There was no minus scoring system if there were wrong answers.

Item Analysis

The test was redirected eliminating in an appropriate items. Item analysis table determines the difficulty index (P-value) and discrimination index (D-value) of each item in the test. The P-value and D-value of each item were calculated from the 27 percent of highest score and 27 percent of the lowest score of 20 students participating in the pilot test. According to Ronald fisher measurement and evaluation in education. Only these items were selected whose P-value where ranging between 30 to 70 percent and D-value is 0.20 to 0.70. In this way 16 items were rejected and the remaining 50 items were accepted for the final form.

Thus, the refined achievement test paper contained only 50 items which was shown in appendix (Table 1).

Instrument

A Standard Achievement Test (SAT) was the main tool of the study. The final form of Mathematics Achievement Test (MAT) would consist of 66 items covering all major skills, concepts, sub-skills of grade five text book. Among them, 21 items were asked from arithmetic with set, 17 from algebra with coordinates, 4 from statistics and 24 from geometry. Similarly, 22 items were asked from knowledge or understanding level, 27 items from skill level and 17 items from application level.

Collection of Data

Prior to final administration of the achievement test, the researcher visited each of the randomly selected schools. The researcher met the headmasters and explained in details the purpose of the visit and sought permission and appointment to visit the schools. Out of 120 students, 20 students were taken as the sample before administering the test. The researcher then, explained the answering procedure of the test to the students. The time allocated for completing the test was 75 minutes only. After the examinations, the answer sheets were collected by the researcher. Finally, the researcher tabulated the scores for five analysis.

Data Analysis Procedure

The mean, standard derivation and two tailed Z-test for large sample size independent sample were used for the analysis of data. All the hypothesis were tested at 0.05 level for significant i.e. 95% confidence level.

Chapter-IV

ANALYSIS AND INTERPRETATION

The data for the study were collected from the students of grade eight on the basis of achievement test. The collected data were tabulated and analyzed for the study of attainment of objectives and verification of the hypothesis.

This chapter deals with the statistical analysis and interpretation of data of the achievement test. These data were tabulated and analyzed using mean, standard deviation and two-tailed t-test. The date of achievement test scores were analyzed under the following headings.

a. Comparison of the achievement of the students urban and rural area.

b. Comparison of the achievement of the boys and girls students.

The main focus of this study was comparison of the achievement in mathematics by urban and rural students of Myagdi district. The raw scores area is presented in the appendix.

Comparison of the achievement of the students in urban and rural area

The mean, standard deviation and corresponding t-value of the score obtained by the students of urban and rural area is presented in table 2 also the bar diagram (fig -1) made the presentation of mean scores comparable.

Table 2

Comparison of urban and rural students' achievement

Location	No. of students	Mean	Standard deviation	Mean difference	t-value	level of significance
Urban	60	24.13	4.23	6.70	4.68	two toiled test 0.05 level
Rural	60	17.43	5			

Region of rejection (R): $t \leq -1.96$ or $t \geq 1.96$ at 0.05 level.

Table -2 shows that the mean scores of urban and rural students are 24.13 and 17.43. Therefore, the mean score of urban students is higher than the rural students' by 6.70. The calculated t-value is 4.68 and tabulated t-value is 1.96 from standard normal table. Since calculated t-value is greater than tabulated value, this difference in mean score was significant at 0.05 level of significance. It indicates that the mathematics was higher than rural area students at 0.05 level of significance. Thus, the null hypothesis has no significance difference in mean achievement of urban and rural area students in mathematics were rejected and alternative hypothesis was accepted.

Achievement of the students in urban and rural area

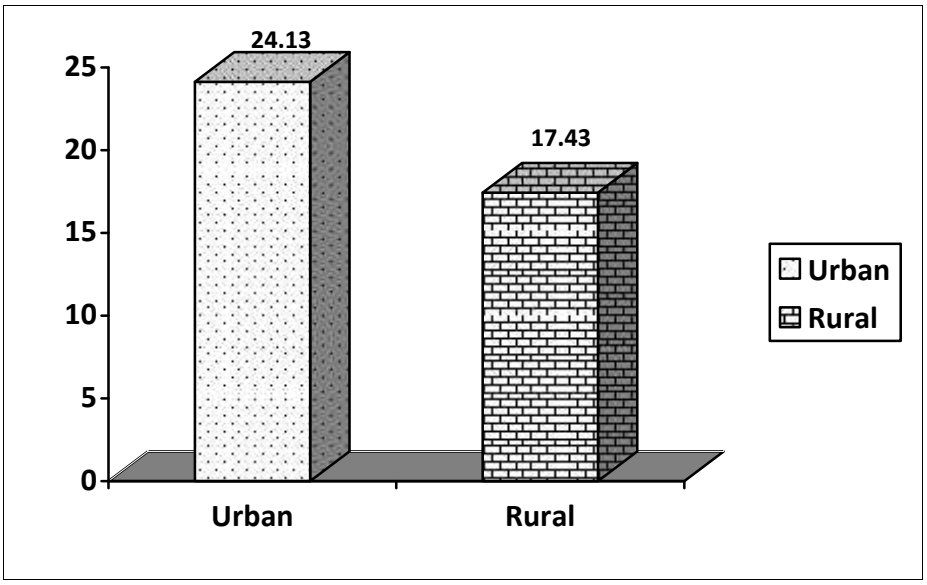


Figure No. 2

Comparison of the achievement of the boys and girls students

The mean, standard deviation & corresponding t-value of the scores obtained by the boy students and girls students are presented in the table 3 and also the mean score easily be observed and compared from the bar diagram.

Table 3

Comparison of the achievement of the boys and girls

Location	No. of students	Mean	Standard deviation	Mean difference	t-value	level of significance
Boys	60	21.4	5.76	5.64	4.30	two toiled test 0.05 level
Girls	60	15.76	4.38			

Region of rejection (R): $t \leq -1.96$ or $t \geq 1.96$ at 0.05 level.

Table 3 shows that the mean scores of boys and girls students are 21.4 and 15.76. Therefore, the mean score of boy's is higher than the girls' by 5.64. The calculated t-value is 4.30 and tabulated t-value is 1.96 from standard normal table. Since calculated t-value is greater than tabulated value, this difference in mean score was significant at 0.05 level of significance. It indicates that the mean achievement of boy's students in mathematics was higher than girls students at 0.05 level of significance. Thus, the null hypothesis has no significant different in mean achievement of boys' and girls' students in mathematics were rejected and alternative hypothesis was accepted.

Achievement of boy and girl students

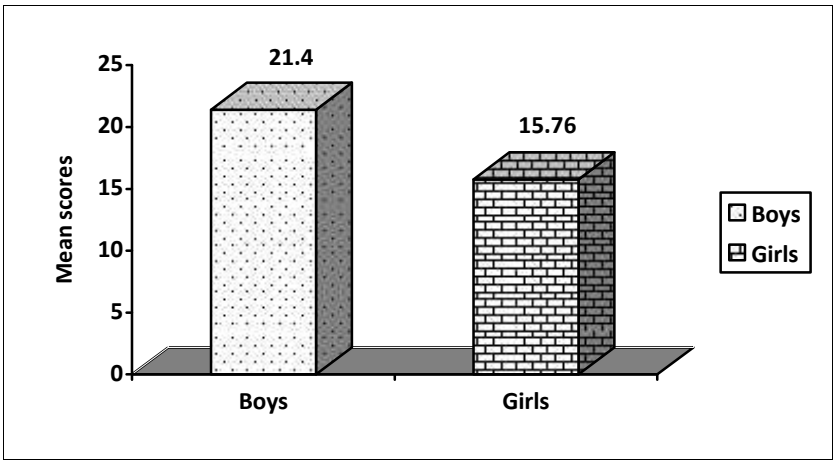


Figure No. 3

Chapter-V

SUMMARY, FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

These chapter summaries the findings derive conclusions: reflect upon the educational implications and suggestions for further study.

Summary

This study was concerned with the comparative study of mathematics achievement of urban Vs rural area and boys Vs girls students of primary level. For this study, the researcher has developed the achievement test paper with the help of prescribed curriculum and text book of mathematics of grade five. To standardize the test paper, pilot test was conducted at Shree Prabha Secondary School, Narchyang-3, Myagdi. The researcher prepared the item analysis chart of test paper for checking items difficulty and discrimination power.

For this study 120 students (60 boys and 60 girls students) were selected randomly from six sample schools of Myagdi districts. The researcher analyzed the collected data by using mean, standard deviation and two toiled t-test at 0.05 level of significance. The researcher toiled to findout the following issues in the process of the research.

a. Comparisons of the achievement of the student in urban and rural area.

b. Comparison of the achievement of the boys and girls students in mathematics.

Findings and Conclusions

From the analysis and interpretation of the collected data by using statistical procedure, the following results are found.

a. The mean scores of urban and rural students were 24.13 and 17.43 respectively. The mean was found significant at 0.05 level.

b. The mean score of boys and girls students were 21.4 and 15.76 respectively. The score of boy students were higher than that of girl students by 5.04. This difference in mean was found significant of 0.05 levels.

Recommendations

After conducting this study, the researcher got some findings. On the basis of those findings, the researcher would like to suggest some recommendations for the effective mathematics teaching at primary level.

a. The study was limited only in Myagdi district. To obtain more valid and generalized conclusion, it is recommended that the study should be carried on national level.
b. The similar study should be carried out for other grades to obtain the students achievement in mathematics.
c. It is recommended to review curriculum, learning outcomes and textbooks and reduce unnecessary content which are irrelevant and impractical.
d. To achieve the goal, teacher strategy should be developed by using authentic material which is very essential for effective teaching and learning.
e. It is recommended that the government schools should manage extra-classes in mathematics.

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APPENDIX -I

ITEM ANALYSIS

Question/Roll	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	P	D	Result
1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	0	1	1	1	0	80	0.4	
2	1	1	1	1	1	1	0	0	1	0	1	1	0	1	0	1	1	1	1	1	75	0.0	Cancelled
3	1	1	1	1	1	1	1	1	1	1	0	1	0	1	0	1	1	0	1	1	85	0.25	
4	1	1	1	1	1	1	0	0	1	1	1	1	0	1	1	1	0	1	1	1	90	0.25	
5	0	0	1	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	20	0.4	
6	0	0	0	0	0	0	1	0	1	1	0	1	0	0	1	0	0	0	1	0	30	-0.2	Cancelled
7	1	1	1	1	0	1	0	0	0	0	1	0	1	1	0	1	1	1	0	0	55	0.2	
8	1	1	1	1	1	1	1	0	0	0	1	1	0	1	1	0	0	0	0	0	55	1.0	
9	1	1	1	1	1	0	1	1	1	1	1	1	0	0	1	1	0	0	1	0	70	0.6	
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	Cancelled
11	1	1	1	1	1	1	0	1	0	1	1	1	1	1	1	0	1	1	0	0	75	0.6	
12	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	15	0.2	
13	1	1	1	0	1	0	1	0	0	1	1	1	0	0	1	0	1	1	1	0	60	0.2	
14	1	1	1	1	0	1	1	0	1	1	0	0	1	1	1	0	1	1	1	1	75	0.0	Cancelled
15	1	1	1	1	1	1	1	1	1	0	1	1	1	1	0	1	1	1	1	1	90	0.0	Cancelled
16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	95	0.8	
17	1	1	1	0	1	1	1	1	0	0	1	0	1	1	1	0	0	1	1	1	70	0.2	
18	1	1	1	1	1	1	1	1	0	0	1	1	1	1	1	1	1	0	1	0	80	0.4	
19	1	1	1	1	1	0	0	0	0	0	0	0	1	1	0	0	1	0	1	0	45	0.6	
20	0	1	1	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	25	0.4	
21	1	1	1	1	1	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	40	0.8	
22	1	1	0	1	1	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	40	0.6	
23	0	0	0	0	1	1	0	1	1	1	0	0	0	0	0	0	0	0	1	1	50	-0.2	Cancelled
24	0	1	1	1	0	0	1	0	1	0	1	1	0	0	0	0	0	1	0	0	40	0.4	
25	0	1	1	0	0	0	0	1	0	1	0	0	1	0	0	0	0	1	0	0	30	0.2	
26	0	0	1	1	0	1	1	0	1	0	1	0	1	0	0	0	0	1	0	1	45	0.0	Cancelled
27	0	1	1	0	1	0	0	0	1	1	0	0	1	0	0	0	0	0	0	0	30	0.6	
28	1	1	0	0	1	0	0	1	1	1	1	0	1	0	0	1	0	0	0	0	45	0.4	
29	0	0	0	0	1	1	0	1	1	0	0	0	0	1	0	1	0	0	0	0	30	0.0	Cancelled
30	1	0	0	0	0	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	25	0.2	
31	1	1	1	1	1	1	1	1	0	1	1	1	1	1	0	1	0	1	0	0	75	0.6	
32	1	1	1	1	0	0	1	1	0	0	0	0	0	1	0	1	0	0	0	0	40	0.6	
33	0	1	1	0	0	1	0	0	1	1	0	0	0	0	0	0	1	0	0	0	30	0.4	

Question/Roll	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	P	D	Result
34	1	1	0	1	0	0	1	1	0	0	1	0	1	0	1	1	1	0	0	0	50	0.2	
35	1	1	1	0	0	1	1	0	1	0	0	0	0	1	1	0	1	0	0	0	45	0.4	
36	1	1	1	1	1	1	1	1	1	1	1	1	1	0	1	0	0	1	1	0	80	0.6	
37	1	1	1	1	1	1	1	1	1	1	0	0	0	0	1	0	1	0	1	0	65	0.6	
38	0	1	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	1	30	0.2	
39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Cancelled
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Cancelled
41	0	0	0	0	1	1	0	0	1	1	0	1	0	0	1	0	0	0	0	0	30	0.2	
42	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	10	0.2	
43	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0.2	
44	1	1	1	0	1	1	1	0	1	1	1	1	1	1	0	0	0	0	0	0	65	0.6	
45	1	0	0	1	1	0	0	1	0	0	0	0	0	00	0	1	1	0	0	0	30	0.2	
46	1	0	1	1	0	1	0	1	1	0	0	0	1	0	0	1	1	0	0	0	45	0.2	
47	1	1	1	1	1	0	1	1	0	1	1	0	1	0	0	1	1	1	1	1	75	0.0	Cancelled
48	1	1	0	0	1	0	1	0	1	1	1	0	0	0	0	0	0	1	0	1	45	0.2	
49	0	0	0	1	0	1	1	0	0	1	0	0	1	0	1	0	0	0	0	1	35	0.0	Cancelled
50	1	1	1	1	0	1	1	1	1	1	1	0	0	0	1	1	0	0	0	1	65	0.4	
51	1	0	0	1	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0	25	0.4	
52	1	0	0	1	0	1	0	1	1	0	0	0	0	0	0	0	1	0	0	0	30	0.2	
53	0	0	1	1	1	1	0	1	0	1	0	0	1	0	1	1	1	1	0	0	55	0.0	Cancelled
54	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	15	0.0	Cancelled
55	0	1	0	0	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	1	25	0.0	Cancelled
56	1	1	1	1	1	1	1	0	1	1	0	1	1	1	0	0	0	1	1	0	70	0.6	
57	1	1	1	1	1	0	0	1	1	1	1	1	1	0	1	1	1	0	1	1	80	0.2	
58	1	1	1	1	1	1	1	1	0	0	1	1	1	0	0	1	0	1	0	1	70	0.4	
59	1	0	1	1	1	0	0	0	0	1	0	0	0	1	0	1	0	1	0	0	40	0.2	
60	1	1	1	1	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	35	0.6	
61	1	1	1	1	0	0	1	1	1	0	0	1	0	0	1	1	0	0	0	1	35	0.4	
62	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0.4	
63	1	0	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0	0	1	30	0.0	Cancelled
64	1	1	1	1	1	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	45	1.0	
65	1	1	1	1	1	1	1	1	0	1	1	1	0	1	1	0	1	0	1	0	75	0.6	
66	1	1	0	1	0	0	0	1	0	0	1	0	1	1	0	0	0	1	0	0	40	0.4	
Total																							
Result																							

APPENDIX -II

Statistical formula use in the analysis

a. Mean $\left(\bar{x}\right) = \dfrac{\sum fx}{N} \Big/ \dfrac{\sum x}{N}$

b. Variance $\left(\pm^{2}\right) = \dfrac{\sum\left(x-\bar{x}\right)^{2}}{N}$

c. Standard Deviation (δ)= $\sqrt{\dfrac{\sum\left(x-\bar{x}\right)^{2}}{N}}$

d. LN=Total number of lower 27% students

e. UN = Total number of upper 27% students

f. Discriminating level (D-level) = $\dfrac{ur-lr}{27\%students}$

g. Difficult level (P-level) = $\dfrac{ur-lr}{27\%students}$,

h. Ur = Number of right respondents students among upper 27%

i. Lr = Number of right respondents students among lower 27%.

j. For t-test $t=\dfrac{\bar{x}_1-\bar{x}_2}{\sqrt{\dfrac{\pm_1^{2}}{N1}+\dfrac{\pm_2^{2}}{N2}}}$ where,

$\bar{x}_1$ = Mean of urban students

$\bar{x}_2$ = Mean of rural students

$\pm_1^{2}$ = variance of urban students.

$\pm_2^{2}$ = variance of rural students.

N1= Number of students in urban area.

N2 = Number of students in rural area.

N = Total number of students.

APPENDIX -III

School is used for standardization the test

Shree Prabha Secondary School, Narchyang-3, Myagdi

Schools are used for sample study

Shree Sarwodaya Higher Secondary School, Bhurung Tatopani-9, Myagdi

Shree Gyan Prakash Higher Secondary School, Dana, Myagdi

Shree Paudwar Secondary School, Paudwar, Myagdi

Shree Prabha Secondary School, Narchyang-3, Myagdi

Shree Raghu Ganga Secondary School, Rakhu Piple, Myagdi

Shree Amar Secondary School, Chimkhola, Myagdi

APPENDIX -IV

Reliability Calculation Table

Students' Roll Number	Odd	Even	Sum	Difference
1	21	23	44H	-2
2	22	21	43H	1
3	19	21	40H	-2
4	18	21	39H	-3
5	23	12	35H	11H
6	15	18	33	-3
7	14	18	32	-4L
8	20	12	32	8H
9	19	12	31	7H
10	17	14	31	3H
11	11	18	29	-7L
12	14	13	27	1
13	12	15	27	-3L
14	10	15	25	-5L
15	13	11	24	2
16	11	13	24L	-2
17	8	12	22L	-4L
18	12	10	22L	2
19	12	8	20L	4H
20	9	11	20L	-2

	Sum	Difference
Sum of the wive highest :	201	33
Some of the lowest :	84+24=108	-23
Difference	$D_2S = 117$	$D_1S = 56$

Difference Square $(D_2S)_2=13689$ or $(117)^2$ $(D_1S)_2=3136$ or $(56)^2$

Reliability Co-efficient (R.C.) $= 1-(D_1S)^2/ (D_2S)^2$

$= 1-3136/13689$

$= 0.7709$ (High relationship)

Since 27 percent of 20 students & reliability co-efficient is 0.7709.

APPENDIX -V

Before Pilot Testing

विद्यार्थी मूल्याङ्कन परीक्षा

नाम:- समय:- ७५ मिनेट

कक्षा: पाँच (५) रोल नं. :

विद्यालय:-

नियमहरु

प्रत्येक प्रश्नको अंकभार १ हुनेछ र मिल्दो उत्तरमा ठीक चिन्ह (√) लगाऊ ।

जस्तै: 144 को वर्गमूल कुन हो ?

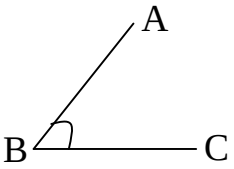
a. 10 b. 11 c. 12 d. 13

समूह क

1. भूजाको आधारमा त्रिभुजको वर्गीकरण कति भागमा विभाजन गरिएको छ ?

a. 2 b. 3 c. 4 d. 5

2. तल दिइएका चित्रमा कोणको नाप पत्ता लगाऊ ।



a. AB b. ABC c. CAB d. ACB

3. त्रिभुजका भित्री कोणहरुको योगफल कति हुन्छ ?

a. 90^0 b. 180^0 c. 270^0 d. 360^0

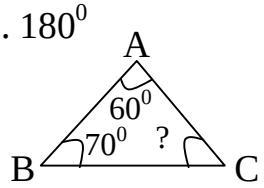
4. कोणहरुको आधारमा त्रिभुजको वर्गीकरण(ा कति भागमा विभाजन गरिएको छ ?

a. 1 b. 2 c. 3 d. 4

5. चतुर्भुजका कोणहरुको योगफल कति हुन्छ ?

a. 90^0 b. 180^0 c. 270^0 d. 360^0

6. तल दिइएको चित्रमा बाँकी कोणको नाप कति हुन्छ ?

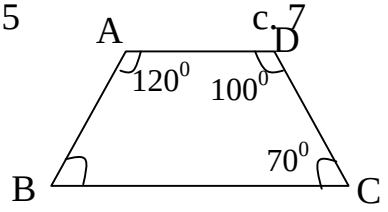


a. 60^0 b. 70^0 c. 50^0 d. 90^0

7. हिन्दू अरेबिक अङ्कहरु कति ओटा हुन्छन् ?

a. 1 b. 5 c. 7 d. 10

8. तल दिइएको चित्रमा बाँकी कोणको नाप कति हुन्छ ?



a. 70^0 b. 100^0 c. 120^0 d. 60^0

9. पाँच अङ्कले बनेको सबैभन्दा सानो संख्या कति हुन्छ ?

a. 10 b. 100 c. 1000 d. 10000

10. 19,56,02,183 लाई अक्षरमा लेख्दा कसरी लेखिन्छ ?

a. उन्नाइस करोड छपन्न लाख दुई हजार एक सय त्रियासी

b. उन्नाइस लाख छपन्न हजार एक सय त्रियासी

c. उन्नाइस करोड छ्यालीस लाख दुई हजार एक सय त्रियासी

d. उन्नाइस लाख छपन्न हजार दुई सय त्रियासी

11. 1 देखि 20 सम्म सङ्ख्याहरुमध्ये रुढ संख्याहरु कतिवटा हुन्छन् ?

a. 2 b. 5 c. 8 d. 12

12. अठार करोड एघार लाख चार हजार साठीलाई अङ्कमा लेख्दा कसरी लेखिन्छ ?

a. 18,11,04,060 b. 18,11,4,060

c. 18,11,40,060 d. 18,11,460

13. 1 देखि 20 सम्म सङ्ख्याहरुमध्ये संयुक्त संख्याहरु कतिवटा हुन्छन् ?

a. 3 b. 7 c. 11 d. 13

14. त्यही संख्या र 1 मात्र गुणनखण्ड भएका संख्याहरुलाई ..... भनिन्छ ।

a. रुढ संख्या b. संयुक्त संख्या c. जोर संख्या d.बिजोर संख्या

15. 830 लाई नजिकको सयमा शुन्यान्त गर्दा कति हुन्छ ?

a. 700 b. 800 c. 900 d. 1000

16. त्यही संख्या र 1 बाहेक अरु पनि गुणनखण्ड हुने संख्याहरुलाई ..... भनिन्छ ।

a. रुढ संख्या b. संयुक्त संख्या c. जोर संख्या d.बिजोर संख्या

17. 1200 लाई नजिकको हजारमा शुन्यान्त गर्दा कति हुन्छ ?

a. 1000 b. 1100 c. 2000 d.1500

18. कुनै एक संख्यालाई त्यही संख्याले गुणा गरेर आउने गुणनफललाई के भनिन्छ ?

a. वर्ग संख्या b. घन संख्या c. जोर संख्या d.बिजोर संख्या

19. 4 को वर्गसंख्या कति हुन्छ ?

a. 4 b. 9 c. 16 d.25

20. 100 को वर्गमूल कुन हो ?

a. 5 b. 10 c. 15 d.20

21. 6 को घन संख्या कति हुन्छ ?

a. 6 b. 120 c. 216 d.350

22. 64 को घन मूल कति हुन्छ ?

a. 2 b. 3 c. 4 d.5

समूह ख

23. संख्या 25 को वर्गमूल कति हुन्छ ?

a. 5 b. 10 c. 15 d. 20

24. रुढ खण्डीकरण कति तरिकाले गर्न सकिन्छ ?

a. 1 b. 2 c. 3 d. 4

25. संख्या 12 लाई रुढ खण्डीकरण गर्दा कस्तो खण्डीकरणको रुपमा प्रस्तुत गर्न सकिन्छ ?

a. 2×2×3 b. 2×2×4 c. 2×2×5 d. 2×2×6

26. गणितका चार साधारण नियमहरु जोड (+), घटाऊ (-), गुणन (×) र भाग (÷) चिन्हहरु समावेश भएका समस्याहरुको समाधान गर्नुलाई ..... भनिन्छ ।

a. रुढ खण्डीकरण b. सरलीकरण c. वर्ग संख्या d. जोर संख्या

27. 15÷5×3+7-15 को सरल गर्दा यसको मान कति हुन्छ ?

a. 1 b. 2 c. 3 d. 4

28. 16 को दुई गुणाबाट 20 घटाएर 13 जोड्दा कति हुन्छ ?

a.10 b. 15 c. 20 d.25

29. रु.10 पर्ने कापी र रु.2 पर्ने इरेजर एकएकओटा तीनजनालाई किन्नुपर्दा जम्मा कति खर्च होला ?

a. 10 b. 25 c. 36 d.50

30. 12-(20-12) लाई सरल गर्दा कति हुन्छ ?

a. 2 b. 4 c. 6 d.8

31. 1 वर्षमा कति महिना हुन्छ ?

a. 4 b. 8 c. 12 d.16

32. 1 घण्टामा कति मिनेट हुन्छ ?

a. 20 b. 40 c. 60 d.80

33. रु.1 मा 100 पैसा हुन्छ भने 100 पैसा बराबर कति रुपैयाँ हुन्छ ?

a. 1 b. 2 c. 3 d.4

34. एउटा ब्याट्रीको रु.10 पर्छ भने 1 दर्जन ब्याट्रीलाई कति पर्ला ?

a. 50 b. 100 c. 120 d.150

35. कुनै सतह वा वस्तुको वरिपरीको घेराको नापलाई के भनिन्छ ?

a. आयत b. परिमिति c. वर्ग d. चतुर्भुज

36. आयताकार सतह भएको वस्तुको परिमिति निकाल्दा कुन सुत्रको प्रयोग गरिन्छ ?

a. P=2(l+b) b. P=l+b c. P=l×b d.P=l^2

37. वर्गाकार सतह भएको वस्तुको परिमिति निकाल्दा कुन सुत्रको प्रयोग गरिन्छ ?

a. P=2(l+b) b. P=l+b c. P=4l d.P=l^2

38. आयताकार वस्तुको क्षेत्रफल निकाल्दा कुन सुत्रको प्रयोग गरिन्छ ?

a. A=l×b b. A=l+b c. A=l+l d.A=b+b

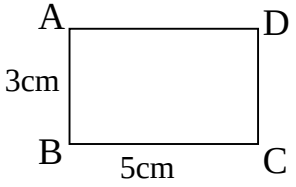
39. एउटा वर्गको लम्बाई 8cm भए परिमिति कति हुन्छ ?

a. 20cm b. 32cm c. 40cm d. 50cm

40. 5cm लम्बाई र 3cm चौडाई भएको आयतको क्षेत्रफल कति हुन्छ ?

a. 10cm^2 b. 15cm^2 c. 20cm^2 d. 25cm^2

41. तल दिइएका आकृतिको परिमिति कति हुन्छ ?



a. 8cm b. 16cm c. 25cm d. 30cm

42. लम्बाई 50m र चौडाई 30m भएको खेतको वरिपरी 5 फन्का मार्न कति लामो काँडेतार चाहिएला ?

a. 500m b. 600m c. 700m d. 800m

43. 1 लिटर (l) मा कति मिलिलिटर (ml) हुन्छ ?

a. 100ml b. 500ml c. 1000ml d.1500ml

44. आयताकार ठोस वस्तुको आयतन निकाल्दा कुन सुत्रको प्रयोग गरिन्छ ?

a. V=l×b×h b. V=l+b+h c. V=l×b d. V=b×h

समूह ग

45. 1 किलोग्राममा कति ग्राम हुन्छ ?

a. 100gram b. 500gram c. 1000gram d.1500gram

46. $\frac{2}{10}$ भिन्नलाई दशमलवमा व्यक्त गर्दा कति हुन्छ ?

a. 0.2 b. 0.02 c. 0.10 d.0.5

47. 5.20735 लाई दशमलवको 3 स्थानमा शुन्यान्त गर्दा कति हुन्छ ?

a. 5.207 b. 5.2 c. 5.2074 d. 5.20

48. $\frac{3}{4}$ लाई प्रतिशतमा व्यक्त गर्दा कति हुन्छ ?

a. 25% b. 50% c. 75% d.85%

49. रु.12 को 25% कति हुन्छ ?

a. 1 b. 2 c. 3 d.4

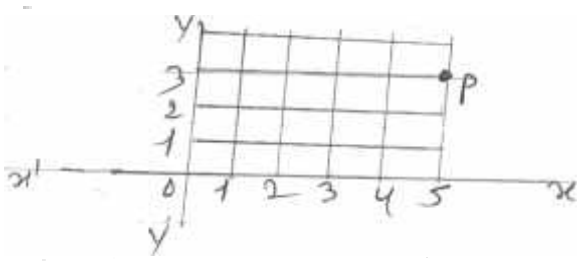
50. प्रति ओटा रु.६छ पर्ने कलम किन्दा छ ओटा कलमको जम्मा मूल्य कति पर्ला ?

a. 50 b. 100 c. 125 d.150

51. साँवा (P), समय (T) र ब्याजदर (R) भएको अवस्थामा ब्याज (I) निकाल्ने सुत्र कुन होला ?

a. $I = \frac{PTR}{100}$ b. $I = \frac{P+T+R}{100}$ c. $I = \frac{P+R}{100}$ d. $I = \frac{P+I}{100}$

52. दिइएको रेखाचित्रमा बिन्दु P को निर्देशाङ्क कुन हो ?



a. (5, 3) b. (5, 2)

c. (5, 1) d.(-5, 3)

53. E={2, 4, 6, 8, 10} के को समूह हो ?

a. जोर गन्तीका संख्याहरुको समूह b. बिजोर गन्तीका संख्याहरुको समूह

c. वर्ग समूह d. घन समूह

54. यदि x=4 र y=3 भए $\frac{3x+2y}{2y}$ अभिव्यञ्जकको मान कति होला ?

a. 1 b. 2 c. 3 d. 4

55. 3a मा 5a जोड्दा कति हुन्छ ?

a. 5a b. 8a c. 10a d. 15a

56. 3ab-4bc+7ab लाई सरल गर्दा कति हुन्छ ?

a.10ab-4bc b.10ab-3bc c.10bc-4ab d. 10a-4b

57. 5a मा 2a घटाउँदा कति हुन्छ ?

a. 1a b. 2a c. 3a d. 4a

58. x+5=7 लाई हल गर्दा कति हुन्छ ?

a. 1 b. 2 c. 3 d. 4

59. कुनै संख्यामा 5 जोड्दा 18 हुन्छ भने त्यो संख्या कति होला ?

a.10 b. 11 c. 12 d. 13

60. 5x+4=2x+7 लाई हल गर्दा कति हुन्छ ?

a. x=1 b. x=2 c. x=3 d. x=4

61. एक हप्तामा कति वटा बारहरु हुन्छन् ?

a. 2 b. 4 c. 6 d. 7

62. 75% लाई भिन्नमा व्यक्त गर्दा कति हुन्छ ?

a. $\frac{1}{2}$ b. $\frac{3}{4}$ c. $\frac{4}{5}$ d. $\frac{5}{6}$

63. $\frac{3}{4}\times\frac{5}{7}$ लाई गुणन गर्दा कति हुन्छ ?

a. $\frac{10}{27}$ b. $\frac{15}{28}$ c. $\frac{20}{39}$ d. $\frac{40}{65}$

64. 3.5kg लाई ग्राममा रुपान्तर गर्दा कति हुन्छ ?

a. 2500g b. 3500g c. 4500g d. 5500g

65. लम्बाई 5cm, चौडाई 4cm र उचाई 3cm भएको एउटा साबुनको आयतन कति होला ?

a. $20cm^3$ b. $40cm^3$ c. $60cm^3$ d. $80cm^3$

66. 5 लि. 200 मि.लि.मा कति मि.लि. हुन्छ ?

a. 4500 मि.लि. b. 5200 मि.लि. c. 5500 मि.लि. d.5700 मि.लि.

Best of Luck

APPENDIX -VI

After Pilot Testing

विद्यार्थी मूल्याङ्कन परीक्षा

नाम:- समय:- ६० मिनेट

कक्षा: पाँच (५) रोल नं. :

विद्यालय:-

नियमहरु

प्रत्येक प्रश्नको अंकभार १ हुनेछ र मिल्दो उत्तरमा ठीक चिन्ह (√) लगाऊ ।

जस्तै: 144 को वर्गमूल कुन हो ?

a. 10 b. 11 c. 12 d. 13

समूह क

1. त्रिभुजका भित्री कोणहरुको योगफल कति हुन्छ ?

a. 90^0 b. 180^0 c. 270^0 d. 360^0

2. भूजाको आधारमा त्रिभुजको वर्गीकरण कति भागमा विभाजन गरिएको छ ?

a. 2 b. 3 c. 4 d. 5

3. चतुर्भुजका कोणहरुको योगफल कति हुन्छ ?

a. 90^0 b. 180^0 c. 270^0 d. 360^0

4. कोणहरुको आधारमा त्रिभुजको वर्गीकरण कति भागमा विभाजन गरिएको छ ?

a. 1 b. 2 c. 3 d. 4

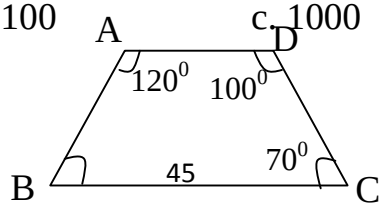
5. हिन्दू अरेबिक अङ्कहरु कति ओटा हुन्छन् ?

a. 1 b. 5 c. 7 d. 10

6. पाँच अङ्कले बनेको सबैभन्दा सानो संख्या कति हुन्छ ?

a. 10 b. 100 c. 1000 d. 10000

7. तल दिइएको चित्रमा बाँकी



कोणको नाप कति हुन्छ ?

a. 70^0 b. 100^0 c. 120^0 d. 60^0

8. 1 देखि 20 सम्म सङ्ख्याहरुमध्ये रुढ संख्याहरु कतिवटा हुन्छन् ?

a. 2 b. 5 c. 8 d. 12

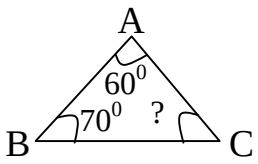
9. त्यही संख्या र 1 मात्र गुणनखण्ड भएका संख्याहरुलाई ..... भनिन्छ ।

a. रुढ संख्या b. संयुक्त संख्या c. जोर संख्या d.बिजोर संख्या

10. 830 लाई नजिकको सयमा शुन्यान्त गर्दा कति हुन्छ ?

a. 700 b. 800 c. 900 d. 1000

11. तल दिइएको चित्रमा बाँकी कोणको नाप कति हुन्छ ?



a. 60^0 b. 70^0 c. 50^0 d. 90^0

12. 1200 लाई नजिकको हजारमा शुन्यान्त गर्दा कति हुन्छ ?

a. 1000 b. 1100 c. 2000 d.1500

13. 4 को वर्गसंख्या कति हुन्छ ?

a. 4 b. 9 c. 16 d.25

14. 6 को घन संख्या कति हुन्छ ?

a. 6 b. 120 c. 216 d.350

15. कुनै एक संख्यालाई त्यही संख्याले गुणा गरेर आउने गुणनफललाई के भनिन्छ ?

a. वर्ग संख्या b. घन संख्या c. जोर संख्या d.बिजोर संख्या

16. 100 को वर्गमूल कुन हो ?

a. 5 b. 10 c. 15 d.20

17. 64 को घन मूल कति हुन्छ ?

a. 2 b. 3 c. 4 d.5

18. संख्या 25 को वर्गमूल कति हुन्छ ?

a. 5 b. 10 c. 15 d. 20

19. रुढ खण्डीकरण कति तरिकाले गर्न सकिन्छ ?

a. 1 b. 2 c. 3 d. 4

20. संख्या 12 लाई रुढ खण्डीकरण गर्दा कस्तो खण्डीकरणको रुपमा प्रस्तुत गर्न सकिन्छ ?

a. 2×2×3 b. 2×2×4 c. 2×2×5 d. 2×2×6

21. 15÷5×3+7-15 को सरल गर्दा यसको मान कति हुन्छ ?

b. 1 b. 2 c. 3 d. 4

22. 16 को दुई गुणाबाट 20 घटाएर 13 जोड्दा कति हुन्छ ?

a.10 b. 15 c. 20 d.25

23. रु.10 पर्ने कापी र रु.2 पर्ने इरेजर एकएकओटा तीनजनालाई किन्नुपर्दा जम्मा कति खर्च होला ?

a. 10 b. 25 c. 36 d.50

24. रु.12 को 25% कति हुन्छ ?

a. 1 b. 2 c. 3 d.4

25. 1 किलोग्राममा कति ग्राम हुन्छ ?

a. 100gram b. 500gram c. 1000gram d.1500gram

समूह ख

26. 1 वर्षमा कति महिना हुन्छ ?

a. 4 b. 8 c. 12 d.16

27. 12-(20-12) लाई सरल गर्दा कति हुन्छ ?

a. 2 b. 4 c. 6 d.8

28. 1 घण्टामा कति मिनेट हुन्छ ?

a. 20 b. 40 c. 60 d.80

29. रु.1 मा 100 पैसा हुन्छ भने 100 पैसा बराबर कति रुपैयाँ हुन्छ ?

a. 1 b. 2 c. 3 d.4

30. एउटा ब्याट्रीको रु.10 पर्छ भने 1 दर्जन ब्याट्रीलाई कति पर्ला ?

a. 50 b. 100 c. 120 d.150

31. आयताकार सतह भएको वस्तुको परिमिति निकाल्दा कुन सुत्रको प्रयोग गरिन्छ ?

a. $P=2(l+b)$ b. $P=l+b$ c. $P=l\times b$ d. $P=l^2$

32. आयताकार वस्तुको क्षेत्रफल निकाल्दा कुन सुत्रको प्रयोग गरिन्छ ?

a. $A=l\times b$ b. $A=l+b$ c. $A=l+l$ d. $A=b+b$

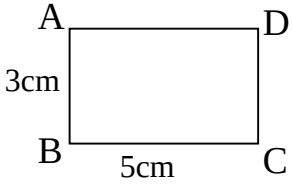
33. वर्गाकार सतह भएको वस्तुको परिमिति निकाल्दा कुन सुत्रको प्रयोग गरिन्छ ?

a. $P=2(l+b)$ b. $P=l+b$ c. $P=4l$ d. $P=l^2$

34. एउटा वर्गको लम्बाई 8cm भए परिमिति कति हुन्छ ?

a. 20cm b. 32cm c. 40cm d. 50cm

35. तल दिइएका आकृतिको परिमिति कति हुन्छ ?



a. 8cm b. 16cm c. 25cm d. 30cm

36. लम्बाई 50m र चौडाई 30m भएको खेतको वरिपरी 5 फन्का मार्न कति लामो काँडेतार चाहिएला ?

a. 500m b. 600m c. 700m d. 800m

37. 5cm लम्बाई र 3cm चौडाई भएको आयतको क्षेत्रफल कति हुन्छ ?

a. $10cm^2$ b. $15cm^2$ c. $20cm^2$ d. $25cm^2$

38. आयताकार ठोस वस्तुको आयतन निकाल्दा कुन सुत्रको प्रयोग गरिन्छ ?

a. $V=l\times b\times h$ b. $V=l+b+h$ c. $V=l\times b$ d. $V=b\times h$

39. 1 लिटर (l) मा कति मिलिलिटर (ml) हुन्छ ?

a. 100ml b. 500ml c. 1000ml d.1500ml

40. $\frac{2}{10}$ भिन्नलाई दशमलवमा व्यक्त गर्दा कति हुन्छ ?

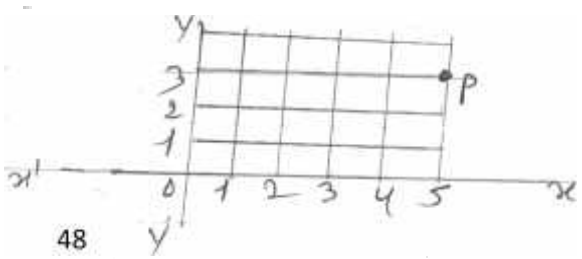
a. 0.2 b. 0.02 c. 0.10 d.0.5

41. प्रति ओटा रु.25 पर्ने कलम किन्दा छ ओटा कलमको जम्मा मूल्य कति पर्ला ?

a. 50 b. 100 c. 125 d.150

42. दिइएको रेखाचित्रमा बिन्दु P को निर्देशाङ्क कुन हो ?

a. (5, 3) b. (5, 2)



c. (5, 1) d.(-5, 3)

43. E={2, 4, 6, 8, 10} के को समूह हो ?

a. जोर गन्तीका संख्याहरुको समूह b. बिजोर गन्तीका संख्याहरुको समूह

c. वर्ग समूह d. घन समूह

44. $\frac{3}{4}$ लाई प्रतिशतमा व्यक्त गर्दा कति हुन्छ ?

a. 25% b. 50% c. 75% d.85%

45. यदि x=4 र y=3 भए $\frac{3x+2y}{2y}$ अभिव्यञ्जकको मान कति होला ?

a. 1 b. 2 c. 3 d. 4

46. x+5=7 लाई हल गर्दा कति हुन्छ ?

a. 1 b. 2 c. 3 d. 4

47. कुनै संख्यामा 5 जोड्दा 18 हुन्छ भने त्यो संख्या कति होला ?

a.10 b. 11 c. 12 d. 13

48. 5a मा 2a घटाउँदा कति हुन्छ ?

a. 1a b. 2a c. 3a d. 4a

49. $\frac{3}{4}\times\frac{5}{7}$ लाई गुणन गर्दा कति हुन्छ ?

a. $\frac{10}{27}$ b. $\frac{15}{28}$ c. $\frac{20}{39}$ d. $\frac{40}{65}$

50. 75% लाई भिन्नमा व्यक्त गर्दा कति हुन्छ ?

a. $\frac{1}{2}$ b. $\frac{3}{4}$ c. $\frac{4}{5}$ d. $\frac{5}{6}$

Best of Luck