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**Grade III Mathematics Achievement Assessment Study,
Afghanistan**

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This draft which will undergo several changes before being finalized for presentation to the agencies involved in the EFA 2000 Assessment for Afghanistan.

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1. BACKGROUND

1.1 Study rationale

The Framework for Action to Meet Basic Learning Needs adopted by the World Conference for Education for All (1990), foresaw the need for an end-of-decade assessment of progress as a basis for a comprehensive review of policies concerning education. In 1998 general and technical guidelines were issued to countries, to guide the preparation of country reports. In view of the particular circumstances in Afghanistan, it was agreed that UNESCO would co-ordinate the EFA 2000 assessment for Afghanistan, with funding support from UNDP. This case study was undertaken as part of the EFA 2000 assessment for Afghanistan.

During the World Conference on Education for All (EFA) held in 1990, the quality of basic educational programmes was seriously questioned. Hence the conference adopted learning acquisition as one of six target dimensions to meet basic learning needs. For the EFA 2000 assessment the various Global and Regional Task Forces encouraged countries to include data on learning achievement in the country reports, and to commission special studies where such data were not readily available.

For Afghanistan no data on learning achievement existed. UNICEF was planning to develop capacity to assess learning achievement in collaboration with other agencies from 2000 onwards, as part of a long-term and inter-agency effort to improve the quality of basic education. Because of its interest in this area, UNICEF volunteered to co-ordinate a case study on learning achievement for the EFA assessment exercise, with the active collaboration of a number of partner agencies working in Afghan education inside Afghanistan as well as on refugee programmes in Pakistan.

1.2 Aims and objectives of the study

The case study has a dual aim:

1. Provide data on learning achievement for the EFA 2000 country report, and

2. Provide an opportunity to learn lessons, to inform the larger scale assessment efforts planned for 2000 onwards.

The specific objectives of the study were thus defined as follows:

- Measure the learning achievement in grade 3 mathematics of Afghan children for the section on learning achievement of the EFA 2000 Afghanistan country report;
- Identify strengths and weaknesses in mathematics learning achievement, and use the findings of the study to adapt/design interventions to improve the quality of mathematics education;
- Test the capacity of the agencies for implementing a monitoring of learning achievement programme on a small scale, to help design a larger inter-agency assessment effort for 2000 and beyond;
- Work towards building Afghan capacity to monitor learning achievement;
- Strengthen cooperation and coordination among education agencies in efforts to address quality issues.

1.3 Participating agencies

UNICEF co-ordinated the study, with significant co-funding provided by UNESCO. Six NGOs collaborated in the study by participating in planning meetings, test design, and data collection in primary schools supported by their agencies. The following agencies participated: Agricultural and Construction Development (ACD), CARE Afghanistan, Norwegian Afghanistan Committee (NAC), Ockenden International (OI), the Swedish Committee for Afghanistan (SCA), and the Save the Children Federation, USA (SC/US). UNICEF was responsible for data analysis and reporting, with technical support provided for the design and data-analysis by UNESCO.

Note: One of the initiatives undertaken in a number of countries to develop/strengthen national capacity to monitor the quality of basic education programmes is the joint UNESCO-UNICEF Monitoring of Learning Achievement (MLA) project. Three Afghan educators were able to participate in a UNICEF sponsored regional workshop held in July 1999 in Sri Lanka on assessing learning achievement, based on lessons learned from the MLA project. This case

study is informed by the MLA project, and has adapted some of the tools and approaches.

2. STUDY DESIGN

2.1 Scope of the study

The indicator in the EFA Technical Guidelines for learning achievement is the percentage of pupils having reached at least grade 4 of primary schooling who master a set of nationally defined competencies.

For this study of Afghan education grade 3 rather than grade 4 was selected, as it is the final year of school for most Afghan girls in Afghanistan for a range of socio-cultural, political and education provision related reasons. Due to time constraints the study was limited to an assessment of learning achievement in mathematics. Mathematics was selected over other subjects because it is a core-subject for the primary education cycle, and also as test items could be developed relatively easily. A further limitation is that due to the current situation inside Afghanistan coupled with time constraints, it was not possible to conduct a nationally representative assessment. However, the assumption was that the broad representation of programmes and geographic locations included in the sample would still yield useful information on student achievement, that could be used to adapt programme interventions to improve quality.

2.2 Study sample

The study employed a three stage sampling process, considering both methodological aspects as well as doability, time constraints, costs etc.:

Stage 1: Stratification by agency programme and geographical spread (country, province, location -urban/rural/refugee village-, and language). The purpose of this stage was to ensure a fair and as much as possible a proportionate representation of various geographic and operational settings. The main limitation here is that agencies are not spread out over all of Afghanistan, and that not all agencies are represented in the study.

No information was readily available on the number of grade 3 students in the various agency programmes. Therefore, the size of the various programmes in terms of total primary students was used to determine the proportion of classes to be tested from each category. Most programmes are roughly the same size, between 7-10,000 students. The only exception is SCA with 175,000 students. To ensure sufficient representation of the smaller programmes, it was therefore decided to allocate three clusters of classes to SCA in different geographic locations, and one cluster each to all the other agencies. This however leads to a disproportionate sampling design, which needs to be taken into account when interpreting the findings.

Stratification Table

Country	Province	Location	Language	Agency
Afghanistan	Paktia/Ghazni	Rural	Pashto	CARE
Afghanistan	Badakhshan	Urban	Dari	NAC
Afghanistan	Kabul	Urban	Dari	ACD
Afghanistan	Kunar	Rural	Pashto	SCA
Afghanistan	Ghazni	Rural	Pashto	SCA
Afghanistan	Wardak	Rural	Dari	SCA
Pakistan	NWFP	RV	Pashto	OI
Pakistan	Balochistan	RV	Pashto	SC US

Stage 2: Stratification by gender (disproportionate sampling)

Stratification by gender, and testing equal numbers of girls and boys was decided upon to ensure sufficient numbers of girls in the sample, even though girls are not equally represented in most education programmes. Agency programmes have separate schools or classes for girls and boys, with very few exceptions, so that the stratification can be done by type of school.

Stage 3: Random sampling of classes

It was decided to test a total number of 12 classes in each geographic cluster, and to select at random 6 classes for girls and 6 for boys. However, it was also decided that in case outlying schools would be selected leading to

insurmountable transport, travel time or other problems, these could be replaced by classes closer to the agency offices. In each class 20 children were tested (unless the class had fewer than 20 children, then all children were tested). This led to a total of 96 classes to be tested, and 1,920 children maximum.

The actual selection was done in a planning meeting from lists of agency schools. In four cases (OI, SC, CARE, ACD), the total number of schools was divided by 12. Any number below the quotient was chosen as the first number in the sample. Then schools were selected systematically from the list, so that every x-th school was selected. In case of CARE, some schools in Paktia had to be substituted for schools in Ghazni, as CARE temporarily did not have full access to the schools due to an issue with the authorities. In the case of Badakhshan, the random selection was based on the number of grades 3 in the few but large urban schools in Faizabad. In the case of SCA, accessibility from the district centre was a consideration in the selection. Also, Wardak was chosen over Takhar in the north (the first choice) because the logistics involved made it impossible to get the tests done in time.

Independent variables:

Data were also selected on a number of other independent variables that may influence student learning. Information on these variables was collected as they occurred in the sample through the survey instruments (see next section), and included children-, teacher-, and school-related factors.

An expert of the Monitoring Learning Achievement and Quality Indicators Project Unit, UNESCO Paris, checked the study design.

2.3 Survey instruments

The following instruments were developed for the study:

Math test: The main instrument was a grade three math test, using a multiple choice format with four options, in keeping with the practices followed in most other countries. Afghanistan does not have an *official* set of nationally defined basic learning competencies. However, Afghan educators from 26 education agencies collaborated in 1999 to develop common performance standards for the primary grades. The resulting Basic Competencies of Learning for mathematics

for grade 3 were used as the framework from which to develop the test. Two sample tests from the MLA project with prototype questions were also available as resource documents. The test went through various stages:

- a draft test in Pashto was prepared by an Afghan participant to the Sri Lanka learning assessment workshop
- the draft test was reviewed, revised and translated into English and Dari by a group of Afghan educators, including several who had been involved in the development of the mathematics Basic Competencies for grade 3:
- the second draft was reviewed, revised and finalised by international education advisers in two of the agencies, against the Basic Competencies for grade 3. Special attention was also paid to distractors for the answers.
- the final test was translated in Dari and Pashto.

The test included 25 test items on seven content dimensions: **place value, addition, subtraction, multiplication, division, fractions and measurement.**

It should be noted that that as no specific expertise on test construction was available, the content validity of the test cannot be guaranteed. However, the test has face validity. Children also indicated their age, language spoken at home, and gender on the test.

School/teacher questionnaire: A brief school/teacher questionnaire was developed, to collect the most pertinent data on schools and teachers that could have an effect on children's performance levels. These included variables related to school and class facilities, class size, availability and type of textbook, teacher qualifications and experience.

2.4 Data Collection:

Each participating agency was responsible for carrying out all aspects of the data collection, using procedures developed for the study. Manuals for test administration were developed in local languages (based on the MLA Test Administrator's Manual), explaining procedures for receipt and distribution of materials as well as activities related to the testing sessions. The test administrators' manual covered procedures for test security, and standardized scripts to regulate directions and timings. Test administrators were also instructed to check that all answers were completed on the school/teacher

questionnaire. If some were left blank they [administrators] were asked to go over the incomplete questions with the teachers and assist in completing the questionnaire.

Prior to the actual testing, a one-day workshop to explain the procedures for the testing was held in Peshawar for the agency staff responsible for the study within their agency. These staff carried out the tests in the schools.

2.4 Data processing and analysis

Data processing: A team of two persons was responsible for data entry and processing; a computer specialist, and an education consultant. In data-entry, rigorous quality-control steps were followed. These steps included data organization and input by the computer specialist, in consultation with the education consultant and UNICEF's Education Officer, which facilitated correct documentation and coding schemes and construction of user-friendly file structures. The UNICEF Programme Assistant in the Education Section provided assistance with data-entry. This process also helped to ensure consistency of information among different data sets, and appropriate linking between student tests and the school/teacher questionnaire.

The UNICEF Programme Assistant cleaned the data. Throughout the process, both data sets were checked and double-checked (cluster by cluster) for any errors, omissions, and oversights. Relevant agencies were contacted from time to time for data-related queries. Native speakers of Pashto and Dari within UNICEF were consulted whenever needed to ensure accuracy of information on the instruments.

Data analysis: The data were analyzed using the Statistical Package for Social Sciences (SPSS) software because of the suitability and breadth of functionality for analyzing test data. A wide range of statistical analysis routines were applied, including data transformation and examination; descriptive statistics; reliability tests; correlation; general linear model; factor and cluster analysis and graphics.

After data manipulation, frequency tables on each variable and content areas of the test were developed. Univariate statistical analyses were run after creating the following "key cluster areas" for the various independent variables:

-
- **Student Variables:** age, gender; language
 - **School and Class Characteristics:** type of school; location; class facilities
 - **Teaching and Learning/Teacher Variables:** textbooks; teacher gender; teacher academic qualifications.

The univariate analysis of the three clusters was done using three-way interaction to decipher all significant complex relationships. Wherever three-way interaction was not significant two-way interaction was used. A visiting UNESCO EFA consultant assisted with the data analysis.

2.5 A note on the interpretation of the findings

When reading this report, the following needs to be considered:

- (1) As earlier stated, the sample is not nationally representative, and no conclusions can be drawn for the education of *all* Afghan children in Afghanistan and Pakistan.
- (2) Since the sample includes only schools that receive agency support (many are well-established programmes), it represents in some ways a "best case" scenario.
- (3) The findings on the test can only provide an *indication* of the degree to which the present primary education programmes for Afghan children teach the basic competencies in mathematics. Results should not be considered absolutes.
- (4) In this test, a score of 80% or more has been selected as the standard for success. However, this cut-off level has been selected arbitrarily. It is meant as a lens for looking at the data.
- (5) The test items were derived from the Basic Competencies, and test against standards. The test does *not* test against textbook content. Testing against standards is useful because it shows whether children are reaching them, regardless of the agency or programme.
- (6) The test results should *not* be seen as a measure of how individual children are performing, but of whether the mathematics instruction is producing desirable levels of student learning.
- (7) The test measures against standards set for Afghanistan, so the results cannot be compared with performance studies in other countries.
- (8) The test results should be considered symptoms of problems, not diagnoses.

3. PERFORMANCE ON THE TEST

3.1 Sample characteristics

The following are some key sample characteristics:

Children in 96 classes were tested. Out of 96 classes, xx (50.4 per cent) of classes were in rural schools, xx (23.5 per cent) in urban schools, and xx (26 per cent) in refugee village schools. Twenty-four (26.1 per cent) of classes were in boys' schools, 26 (28.3 per cent) were girls' schools and 42 (45.7 per cent) were mixed gender schools.

The test was administered on a total of 1,741 grade 3 students. As indicated in table 1, the sample consisted of 948 (54.5 per cent) boys and 793 (45.5 per cent girls); xx (yy per cent) of the students were from schools in rural locations, xx (yy per cent) from urban locations, and xx (yy per cent) from refugee village locations.

Distribution of the sample by school location, school type and gender

Study Sample:

- Urban Schools: 23.5%
- Rural Schools: 50.4%
- Refugee Village Schools (NWFP & Balochistan): 26.0%

- Number of Boys' Schools: 26.1% (24)
- Number of Girls' Schools: 28.3% (26)
- Number of Mixed Schools: 45.7% (42)

- Total Number of Classes: 96 (*Note: School Data was found missing from four classes*)
- Total Number of Students: 1741
- Number of Boys: 54.5% or 948
- Number of Girls: 45.5% or 793

3.2 Overall performance

The mean (average) score on the test was 54.9 per cent, which is low considering the test was a four item multiple choice test. The lowest score on the test was 0.00 per cent, scored by 15 (0.9 per cent) of all students. The highest score was 100 per cent, scored by 53 (3 per cent) of all students.

Insert small table with data above

For the purpose of analysis four performance categories were developed, in consultation with the test designers as well as other Afghan education professionals. Thirty five (35) percent was selected as the cut-off score in the low achieving category, as it corresponds with the exam pass percentage in Afghanistan. Eighty (80) percent or higher was selected as the highest achieving category. In this category the large majority of student scores should fall if mathematics instruction were successful in teaching the basic competencies. The standard for success selected for this study was for 80 per cent of students or more to have achieved a score of 80 per cent or higher on the test.

Table x: Test scores by performance category

		Percent	No. of Students
Category-I	Up to 35%	24.2	421
Category-II	35+ to 60%	33.9	591
Category-III	60+ to 80%	22.8	397
Category-IV	80+ to 100%	19.1	332
	Total	100.0	1741

Table x shows that only 19.1 per cent of children in the sample score in the highest category, rather than the minimum of 80 percent of children as stipulated as success rate. Even if we take into consideration factors that could have influenced test scores negatively (such as relative unfamiliarity with the test formats), these remain very low scores. Almost one quarter (24.2 per cent) of students scored below 35 per cent. This is high, considering that with 4 item multiple choice tests that a score of 25 per cent is the guess-chance, i.e. the score that would be obtained if a student did not attempt any question, but simply guessed all the answers.

3.3 Student Characteristics

The following student characteristics were correlated with math scores: gender, age, and language spoken at home (if different from language of instruction).

3.3.1 Gender

The proportion of girls in the sample was 45.5 per cent (xx), as a function of the sampling design, which was stratified by gender. The proportion of girls in the overall population of school children in the agencies participating in this study is not known exactly, but estimated to be between 25 and 40 percent. Xx percent (xx) of the students in the sample were boys. The analysis by gender showed that the mean score of girls was 57.7 per cent, and that of boys 52.7 percent.

Add achievement table by performance category and sex

The table above further shows that the percentage of girls in the highest scoring category is 5 per cent higher than the percentage of boys scoring in that category (22 percent girls versus 17 percent boys). The other significant difference is found in the low achieving category (a score of 35 per cent and below). Twenty seven (27) per cent of boys scored in this category, and 20 per cent of girls.

- girls outperformed boys, both in terms of average as well as in achievement by performance category;
- the difference between the mean scores is significant at the 5 per cent level;
- a higher proportion of girls mastered the basic competencies at grade 3 level;
- despite better scores, the performance of girls is also poor overall;
- the higher girls' average of 5 percentage points only corresponds to 1.25 items extra correct on the test.

TABLE 2: Mean (in %) by Student gender

Student's Sex	Mean	No. of Students
Boys	52.69	948
Girls	57.74	793
Overall	54.99	1741

3.3.2 Age

The age distribution of students is shown in table x. The norm in Afghanistan is for children to start grade 1 at age 7, so that age 9 and 10 are the ages most commonly found in grade 3. This is indeed the case, with 49.5 percent of students of these ages. However, the table also shows that there are

considerable proportions of especially over-age children in Afghan classrooms (32.4 per cent), and a smaller but still significant proportion of under-age children (9.1 per cent).

Table 3:

Student's Age	Percent
7 years	1.6%
8 years	7.5%
9 years	19.9%
10 years	29.6%
11 years	14.0%
12 years	18.4%
Above 12 years	9.0%

Univariate analysis of student age as related to performance on the test indicated that there is a consistent improvement in score with age i.e., the older the students the better the performance.

Add table that shows this (table in annex not clear); to be analysed anew (Ibad)

3.3.3 Language

Xx percent of students had Pashto as mother tongue, xx per cent Dari, and xx per cent Uzbeki. How many students were not taught in mother tongue? (Ibad to find out).

Univariate analysis of the impact of language on student performance in mathematics indicated a main effect i.e., performance in schools where the language of instruction is Pashto is significantly better where the language of instruction is Dari.

3.4 Teacher Characteristics

Teacher Gender:

- 59.8% Males
- 40.2% Females

Teacher Age

- 4.3% under 20 yrs of age
- 38.0% 21 to 30 yrs
- 32.6% 31 to 40 yrs
- 23.9 41 to 50 yrs
- 1.1% 51 yrs and above

Table 10: What is your (teachers') age?

	Percent	N
Under 20 years	4.3	4
21 - 30 years	38.0	35
31 - 40 years	32.6	30
41 - 50 years	23.9	22
51 years & over	1.1	1
Total	100.0	92
System Missing		4
Total		96

- Female teachers produced statistically better student-performance results in six of the seven content areas on the test.
- Univariate analysis indicated a significant relationship between the performance of teachers (particularly female teachers) and various mathematics textbooks used in grade III.
- The years of teaching experience has a negative correlation with student achievement.

3.5 School and Class Characteristics

Location

- Rural schools performed better overall than Urban locations on mean score (45.9% urban; 51.8% and refugee villages 69.3%)

Classroom and School Characteristics based on performance:

The univariate analysis of school/classroom structure as related to student performance indicates that, where classes were held in buildings made no difference in student performance. In fact, student performance was found to be highest in settings other than classrooms in building structures.

- Best overall performance appears to be in schools operating in tents where the students' mean score is 74.3%
- Open air school mean score is 52.7%
- Students in classroom in tents obtained a mean score of 63.8%
- Classrooms inside buildings indicated a mean score of 56.3% and students in open-air classrooms scored 46.1% (*see fig-16*).

Table 7: School Facility by Student's Mean Marks.

School Facilities	Mean	N
Building	53.4	1212
Tent	64.2	40
Open air	52.7	186
Other	59.2	210

Table 8: Mean Marks by Class (tested) facilities

	Mean	N
Classroom (inside)	56.3	1209
Tent	63.8	60
Open air	46.1	273
Other	54.9	124
Total	54.8	1666

CLASS SIZE

Table 9: Percentage Distribution of Students by Class Size

Up to 10 students	2.2% (lowest)
11-20 students	35.9%
21-30 students	17.4%
31-40 students	35.9%
41 and above	8.7%

Analytical Note: The cumulative percentage indicates that 55.4% pupils are in those classes where the number of students is up to 30. The average class size of 11-30 has an overall better student achievement rate in this case. However, that is not the case when student achievement is measured at item-to-item level [section of seven content areas on the test]. Extensive research on relationship of class size and student performance in Mathematics indicates that the existence of such relationship is dependent more upon teacher attitudes and instructional strategies than class size.

Teachers may adopt a range of organizational, instructional and pedagogic approaches in a particular mathematics class setting. In some, larger class size may be representative of the more usual situation for mathematics teaching, with smaller classes mostly used for students needing remedial work.

In Afghanistan, performance may not have been related to the class size itself, but demonstrative of a teacher's ability to develop and teach mathematical concepts; attitude; general efficiency in class management; qualification; and gender. (*Note: For further comments see policy implications*)

4. Performance by content areas

Student Performance on Seven Content Areas on the Assessment Test:

Because the seven content areas are highly interrelated, each complementing and reinforcing the other, no priority ranking among them is suggested. *However, it must be noted that a score of above 33% and below 60% is clearly below the internationally accepted basic Competency in Mathematics at Grade III level. For that comparison, a score of 60% and above on this test should be taken as representative of sufficient Basic Competency in Mathematics at grade III level.*

- *Percentage and Number of Students with Score of 60% to 80%: 22.8% or 397*
- *Percentage and Number of Students with Score of 80% to 100%: 19.1% or 332*

■ **Total Number of Students with score of 60% and above: 41.9% or 729**

The following analysis is according to the Afghanistan pass percentage of 33% and is presented in *low to high* format:

Place-value:

- 24.2% or 422 students (boys 283/67.1% & girls 139/32.9%) scored below 33% in this content area

Subtraction:

- 24.2% or 421 students (boys 229/54.4% & girls 192/45.6%) scored below 33% in this content area.

Fractions:

- 20.6% or 358 students (boys 210/58.7% & girls 148/41.3%) scored below 33% in this content area.

Measurements:

- 19.4% or 338 students (boys 200/59.2% & girls 138/40.8%) scored below 33% in this content area.

Division:

- 18.4% or 321 students (boys 177/55.1% & girls 144/44.9%) scored below 33% in this content area.

Multiplication:

- 18.3% or 319 students (boys 181/56.7% & girls 138/43.3%) scored below 33% in this content area.

Addition:

- 17.1% or 298 students (boys 177/59.4% & girls 121/40.6%) scored below 33% in this content area.

Table 5: Content Areas by Student's Gender Crosstabulation

	Overall						
	Place value	Addition	Subtraction	Multiplication	Division	Fraction	Measurements
Up to 33%	24.2	17.1	24.2	18.3	18.4	20.6	19.4
33+ to 60%	29.0	27.3	28.3	22.7	24.1	32.3	29.4
60+ to 80%	28.4	30.0	26.8	27.8	28.3	27.7	15.5

80+ to 100%	18.3	25.6	20.7	31.1	29.2	19.4	35.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

The content area analysis at 33% as the lowest score indicates that Place-value and Subtraction appear to be the most difficult for students i.e., the largest number of students failed to obtain 33% or minimum required basic competency in mathematics percentage in these content areas.

The second most difficult content area appears to be Fractions.

The third most difficult content area appears to be Measurements.

Division and Multiplication content areas appear to offer the same level of difficulty for students on the test.

Addition appears to be the best area of student performance.

The Measurement content area appears to have the highest number of students in the best performance (80% or above) category which is 35.7% or 622 students, of which 46.8% or 291 are boys and 53.2% or 331 are girls.

The second best performance content area is Multiplication, in which 31.1% or 542 students scored more than 80% or above.

The third best performance content area is Division, in which 29.2% or 508 students scored more than 80%.

The fourth best performance content area is Addition, in which 25.6% or 445 students scored 80% or above.

The fifth best performance content area is Subtraction, in which 20.7% or 360 students scored 80% or above; followed by Fractions 19.4% or 337 students; and Place-value with 18.3% or 310 students.

11. Overall Student Performance on Seven Content Areas on the Assessment

Test:

Table 6: Student's Mean Score (%) by Content Areas (from highest to lowest):

		Overall
PLACE VALUE (%)	Mean	59.0
MEASUREMENTS (%)	Mean	57.5
MULTIPLICATION (%)	Mean	57.2
DIVISION (%)	Mean	56.1

ADDITION (%)	Mean	54.7
FRACTIONS (%)	Mean	48.6
SUBTRACTION (%)	Mean	48.0
Valid N		1741

Analytical Note: It must be noted that students scoring less than 60% on the test may be considered to have been unsuccessful in meeting the Basic Competency in Mathematics. However, there are important factors to be taken into account:

The content areas on the test did not derive from the regular mathematics syllabus studied by the students. They were designed within the framework of Basic Competencies. This difference could have led to an increased level of difficulty and a lower score on the test. It may be argued that there is a possibility of 25% “guess work” on the test items to compensate for the increased level of difficulty but that “leverage” does not compensate equally when the following factors are taken into account. Furthermore, these students may not have been familiar with the multiple choice test format.

- (a) There is no information available on time-on-task, i.e., time spent teaching the curriculum (by teachers) or learning from the curriculum (by students). These measures are different from allocated time, that is, how many hours/minutes are assigned to instruction. This is an important factor because, if the performance of these Afghan students is to be compared with their peers [on Basic Competency in Mathematics standards] in other countries/regions/academic settings, then the similarities and differences in their learning environment should be considered as factors weighted equally to measure comparable performance/competency in mathematics.
- (b) The data analysis indicates that the type of textbook in use had an impact on student performance. This effect may have multiple reasons: a specific textbook’s content may have resulted in better understanding of the test; one textbook might be easier to teach/more interesting to teach and study/; or may be easily available.
- (c) We do not have information on the factor of assignment of homework by teachers. Homework is generally considered a method of extending time on tasks (by the learner as well as the teacher). Research on student achievement is demonstrative of the fact that homework generally has an impact on student performance, particularly when assigned regularly, commented upon, and graded.

It is also instrumental in providing information to the teacher about the content areas in which students may need more work, both individually and collectively, to improve performance. In-class performance, in combination with performance on homework assignments also facilitates self/peer evaluation of teachers' ability to teach mathematical concepts as well.

5. Item analysis

6. Conclusions and Recommendations

Based on the results of the test and other evidence collected, there are six specific policy implications:

- maintain a focus on a limited number of key initiatives
- sharpen the focus on classroom practices
- identify and disseminate good practices
- prioritize data collections and analysis and create school profiles
- develop differentiated professional support for teachers and headteachers
- communicate with teachers and parents more directly.

This student achievement assessment study is only the beginning of a systemic analysis of Afghan Education, both in specific areas and as a whole. This consultancy believes that it would be premature to advocate grand policy recommendations based on these early and limited analyses. Moreover, several summary points which may hold policy implications, are as follows:

These policy implications are of equal importance, and take into account the constraints that agencies have to deal with in reference to the current situation in Afghanistan. These agencies manage to carryout their commendable programs and efforts towards educational provision and development in Afghanistan in spite of adverse circumstances:

- Time in school does make a significant difference in improving student achievement, not only in mathematics but in other subjects as well. Ways of organizing schooling that increase the amount of time spent in school/classroom and *time-on-task* via homework and parental involvement are likely to boost achievement further.
- Scores on this test and the results of other educational research in student achievement indicate that one effect of better ability in local language/s boost

performance in mathematics. There should be more emphasis on better proficiency in both Pashto and Dari for the Afghan children.

- A major irony exists with regard to performance indicators on this test: girls outclassed boys in five of the six content areas. But after grade three, female drop-out rate in Afghanistan is alarmingly high. It is understood that the political, social and cultural situation in Afghanistan results in that drop-out rate. Can the schools and other educational initiatives compensate for family demands and social norms? Donor and assistance community should open and sustain a multifaceted dialogue with the authorities to address this issue more convincingly.
- An improved design of achievement assessment and other studies would certainly prove to be more effective and informative. Project consultants and educational experts should be consulted during various levels of the project cycle – particularly at the conceptual, design, and administration/implementation stages.
- Educational research and reform is a learning process both evolutionary and developmental in nature; it cannot be blueprinted ahead of time. Any educational reform, especially in complex settings such as Afghanistan, should build structures and capabilities at all levels. *The key to success is to get good data from all parts of the system on a continuous basis. This implies the development of an effective and efficient Educational Management Information System, which in turn, would give way to an effective coordination, supervision, and monitoring system.*
- Ad-hoc solutions do not work in medium and long time frames. Institutional and capacity building on good and reliable information with sustained commitment is essential at all levels.
- Teacher mastery of the subject matter (e.g., mathematics, in this case) is a critical factor in student learning and can be best developed through a systematic learning process of teacher training, supervision and coaching. In-service teacher training, is a key determinant for teacher mastery, and teacher mastery is a key variable for the understanding of improved classroom practice. Research in this area demonstrates that assistance teacher training should be concrete and subject specific. In the case of Afghanistan, it should be made locally available, regular and on-going and above all supported by a climate of cooperation among all parties involved.

- Teaching and learning materials contribute to teacher mastery and improve classroom practices. The more teachers are involved in local development of materials, the more this leads to teacher mastery. Difficult as it may be at this point, agencies involved in education in Afghanistan should coordinate textbook and other teaching/learning materials development, i.e., a standard textbook of Mathematics [compatible with Basic Competency Standards in Mathematics] for each grade level to facilitate better achievement assessment studies in the future. Teacher input should be an integral component of this process.
- The Third International Mathematics and Science Study (TIMSS), the most important international survey of educational outcomes to take place in the 1990s, indicated, amongst other findings, that in combination with the teacher/school factors, parent and community participation contributes to student achievement in mathematics and science. In the case of Afghanistan, a participatory approach involving parents and communities could have several benefits:
 - (a) Development and maintenance of schools, particularly in rural areas.
 - (b) Reduction in girls drop-out rate
 - (c) Delegation of responsibilities as a key strategy in developing empowerment, commitment, and local development.

Develop stronger linkages at the community level; demonstrate they can hire capable staff; train their staff members in local community processes and educational methodologies; build networks and capacities across sectors. (*Andrea B. Rough, Education for Afghans, A Strategy Paper, UNICEF ACO, ISLAMABAD, July 1998 p.48*)

- A strong local capacity with an emphasis on school and classroom practice. This means local empowerment and participation. Room to manage local implementation, latitude for adapting the programs and initiatives to be maximally effective locally, assistance that facilitates and encourages teacher practices and participation to develop and strengthen.
- Cohesive and effective linkages between all participants via information, assistance, pressures (defined as pedagogical requirements), and rewards. The various means of communication in the 'system' must reflect encouragement and commitment between levels, not bureaucratic, rule driven control.

Bibliography

Fullen, Michael Change Forces; Probing the Depths of Educational Reform, The Falmer Press, London 1993

McGinn Noel F. & Borden Allison F. Framing Questions, Constructing Answers, Harvard institute for International Development, Cambridge, Massachusetts 1994

Robitaille David F. National Contexts for Mathematics and Science Education (TIMSS), Pacific Educational Press, Vancouver, Canada 1997

Papers & Studies

Education for Afghans. A Strategy Paper by *Andrea B. Roush*. Save the Children &

Education – The State of the World's Children 1999, UNICEF 1999

Means

Report

SCORE OF STUDENT (0-25)

Student's Sex	Mean	N	Std. Deviation
Boys	13.1730	948	6.4430
Girls	14.4338	793	6.4695
Total	13.7473	1741	6.4837

Frequencies

SCORE OF STUDENT (0-25)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid .00	15	.9	.9	.9
1.00	18	1.0	1.0	1.9
2.00	33	1.9	1.9	3.8
3.00	35	2.0	2.0	5.8
4.00	61	3.5	3.5	9.3
5.00	65	3.7	3.7	13.0
6.00	53	3.0	3.0	16.1
7.00	69	4.0	4.0	20.0
8.00	72	4.1	4.1	24.2
9.00	80	4.6	4.6	28.8
10.00	81	4.7	4.7	33.4
11.00	90	5.2	5.2	38.6
12.00	75	4.3	4.3	42.9
13.00	96	5.5	5.5	48.4
14.00	82	4.7	4.7	53.1
15.00	87	5.0	5.0	58.1
16.00	84	4.8	4.8	63.0
17.00	81	4.7	4.7	67.6
18.00	76	4.4	4.4	72.0
19.00	73	4.2	4.2	76.2
20.00	83	4.8	4.8	80.9
21.00	87	5.0	5.0	85.9
22.00	71	4.1	4.1	90.0
23.00	76	4.4	4.4	94.4
24.00	45	2.6	2.6	97.0
25.00	53	3.0	3.0	100.0
Total	1741	100.0	100.0	

Means

MARKS TAKEN (%)

Student's Sex	Mean	N	Std. Deviation
Boys	52.6920	948	25.7718
Girls	57.7352	793	25.8780
Total	54.9891	1741	25.9348

MARKS TAKEN (%)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 0.00	15	.9	.9	.9
4.00	18	1.0	1.0	1.9
8.00	33	1.9	1.9	3.8
12.00	35	2.0	2.0	5.8
16.00	61	3.5	3.5	9.3
20.00	65	3.7	3.7	13.0
24.00	53	3.0	3.0	16.1
28.00	69	4.0	4.0	20.0
32.00	72	4.1	4.1	24.2
36.00	80	4.6	4.6	28.8
40.00	81	4.7	4.7	33.4
44.00	90	5.2	5.2	38.6
48.00	75	4.3	4.3	42.9
52.00	96	5.5	5.5	48.4
56.00	82	4.7	4.7	53.1
60.00	87	5.0	5.0	58.1
64.00	84	4.8	4.8	63.0
68.00	81	4.7	4.7	67.6
72.00	76	4.4	4.4	72.0
76.00	73	4.2	4.2	76.2
80.00	83	4.8	4.8	80.9
84.00	87	5.0	5.0	85.9
88.00	71	4.1	4.1	90.0
92.00	76	4.4	4.4	94.4
96.00	45	2.6	2.6	97.0
100.00	53	3.0	3.0	100.0
Total	1741	100.0	100.0	

AGER

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 7 years	28	1.6	1.6	1.6
8 years	128	7.4	7.5	9.1
9 years	341	19.6	19.9	29.0
10 years	508	29.2	29.6	58.6
11 years	240	13.8	14.0	72.6
12 years	315	18.1	18.4	91.0
Above 12 years	155	8.9	9.0	100.0
Total	1715	98.5	100.0	
Missing System	26	1.5		
Total	1741	100.0		

Marks(percentage) Achieve by student by Teacher Gender

		Indicate teacher's sex		Total
		Male	Female	
MARKS TAKEN (%)	Mean	54.61	55.02	54.77
	Valid N	1028	638	1666

SCHOOL/ TEACHERS BY MARKS (%) - Overall

		MARKS TAKEN (%)	
		Mean	Valid N
Supported Agencies	ACD-Agriculture & Construction Development	65.74	209
	CARE International	58.32	233
	NAC-Norwegian		
	Afghanistan Committee/ UNICEF	25.31	201
	OI-Ockenden International	90.72	225
	SCA-Swedish Committee for Afghanistan	49.49	645
	SC USA-Save the Children USA	48.19	228
	Total		54.99
Type of School (Boys/Girls/Mixed)	Boys school	53.90	442
	Girls school	60.30	445
	Mixed school	52.10	779
Total		54.77	1666
School Calander	Cold season	46.99	1014
	Hot season	68.26	325
	School open all year	67.86	288
	Other	47.79	39
Total		54.77	1666
Province where school located	Badakhshan	28.40	221
	Ghazi	50.30	338
	Kabul	65.74	209
	Kunar	53.34	229
	Paktia (Khost)	47.79	39
	Takhar	49.40	177
	Balochistan (Pakistan) NWFP (Pakistan)	48.19	228
Total		54.77	1666
Language/medum of instruction in the school	Pashto	59.69	921
	Dari	48.68	745
Total		54.77	1666
School Facilities	Building	53.42	1212
	Tent	64.20	40
	Open air	52.71	186
	Other	59.20	210
	No info.	94.00	18
Total		54.77	1666
Class (tested) facilities	Classroom (inside)	56.26	1209
	Tent	63.80	60
	Open air	46.08	273
	Other	54.94	124
Total		54.77	1666
Class size	1 - 10 students	64.27	15
	11 - 20 students	58.90	552
	21 - 30 students	53.23	302
	31 - 40 students	52.11	644
	41 or more students(please specify #)	53.15	153
Total		54.77	1666
Type of textbook used by the teacher for Maths	UNO revised	60.76	719
	SCA books	44.76	510
	GTZ/ BEFARc	48.19	228
	Other (please specify)	65.74	209
Total		54.77	1666
Availability of mathemtics textbooks for students	All students have the book	52.65	1371
	More than half	55.46	37
	less than half	74.99	146
	None of the students	54.04	112

SCHOOL/ TEACHERS BY MARKS (%) - Overall

		MARKS TAKEN (%)	
		Mean	Valid N
Total		54.77	1666
Indicate teacher's sex	Male	54.61	1028
	Female	55.02	638
Total		54.77	1666
What is your (teacher) age?	Under 20 years	62.83	72
	21 - 30 years	56.07	615
	31 - 40 years	52.47	561
	41 - 50 years	55.66	398
	51 years & over	32.40	20
Total		54.77	1666
What is your highest academic qualification?	Completed primary	46.90	40
	Completed middle school (G 9)	53.16	152
	Completed lice (G 12)	55.49	1005
	BA/ BSc	68.98	257
	Other	29.73	146
	No Info.	52.18	66
Total		54.77	1666
Provide information about type of professional training you	No professional training	55.00	520
	Emergency TTS (10th G)	93.26	19
	Teacher training high School (12th G)	66.78	183
	Teacher training Institute (14th G)	46.35	225
	Institute of Pedagogy (16th G)	78.02	111
	Other (please specify)	46.74	472
	No Info.	55.15	136
Total		54.77	1666
Provide the # of years of experience you have in teaching pr	Less than 1 year	64.29	196
	1 - 5 years	56.46	709
	6 - 10 years	42.24	340
	11 - 20 years	56.54	298
	21 or more years	64.74	103
	No info.	36.80	20
Total		54.77	1666

LOWEST ACHIEVEMENT PERCENTILE(0 to 33%) - SCHOOL/ TEACHERS BY MARKS (%)

		MARKS TAKEN (%)	
		Mean	Valid N
Supported Agencies	ACD-Agriculture & Construction Development	25.33	21
	CARE International	24.75	32
	NAC-Norwegian Afghanistan Committee/ UNICEF	14.18	147
	SCA-Swedish Committee for Afghanistan	22.80	170
	SC USA-Save the Children USA	24.63	51
	Total	20.29	421
	Type of School (Boys/Girls/Mixed)	Boys school	17.61
	Girls school	22.02	81
	Mixed school	20.97	222
Total		20.26	417
School Calander	Cold season	19.17	347
	Hot season	26.00	40
	School open all year	26.60	20
	Other	22.40	10

LOWEST ACHIEVEMENT PERCENTILE(0 to 33%) - SCHOOL/ TEACHERS BY MARKS (%)

		MARKS TAKEN (%)	
		Mean	Valid N
Total		20.26	417
Province where school located	Badakhshan	14.34	149
	Ghazi	24.00	84
	Kabul	25.33	21
	Kunar	20.88	59
	Paktia (Khost)	22.40	10
	Takhar	24.47	43
	Balochistan (Pakistan)	24.63	51
Total		20.26	417
Language/medum of instruction in the school	Pashto	23.11	167
	Dari	18.35	250
Total		20.26	417
School Facilities	Building	20.36	332
	Tent	29.33	6
	Open air	17.38	55
	Other	23.17	24
Total		20.26	417
Class (tested) facilities	Classroom (inside)	20.08	293
	Tent	27.50	8
	Open air	19.92	98
	Other	21.78	18
Total		20.26	417
Class size	1 - 10 students	24.00	2
	11 - 20 students	19.62	138
	21 - 30 students	21.32	76
	31 - 40 students	19.97	159
	41 or more students(please specify #)	21.33	42
Total		20.26	417
Type of textbook used by the teacher for Maths	UNO revised	15.98	176
	SCA books	22.77	169
	GTZ/ BEFARc	24.63	51
	Other (please specify)	25.33	21
Total		20.26	417
Availability of mathemtics textbooks for students	All students have the book	19.85	380
	More than half	21.45	11
	less than half	27.20	5
	None of the students	25.33	21
Total		20.26	417
Indicate teacher's sex	Male	22.97	236
	Female	16.73	181
Total		20.26	417
What is your (teacher) age?	Under 20 years	12.33	12
	21 - 30 years	16.84	172
	31 - 40 years	22.55	143
	41 - 50 years	24.00	79
	51 years & over	25.82	11
Total		20.26	417
What is your highest academic qualification?	Completed primary	25.60	5
	Completed middle school (G 9)	21.90	42
	Completed lice (G 12)	20.85	241
	BA/ BSc	24.89	18
	Other	15.83	92
	No Info.	24.84	19
Total		20.26	417

LOWEST ACHIEVEMENT PERCENTILE(0 to 33%) - SCHOOL/ TEACHERS BY MARKS (%)

		MARKS TAKEN (%)	
		Mean	Valid N
Provide information about type of professional training you	No professional training	22.46	114
	Teacher training high School (12th G)	20.86	28
	Teacher training Institute (14th G)	16.53	90
	Institute of Pedagogy (16th G)	22.00	2
	Other (please specify)	19.85	159
	No info.	25.67	24
Total		20.26	417
Provide the # of years of experience you have in teaching pr	Less than 1 year	23.57	28
	1 - 5 years	19.66	163
	6 - 10 years	18.91	150
	11 - 20 years	22.55	55
	21 or more years	23.75	16
	No info.	25.60	5
Total		20.26	417

LOWER MILLDE ACHIEVEMENT PERCENTILE(33+ to 60%) - SCHOOL/ TEACHERS BY MARKS (%)

		MARKS TAKEN (%)	
		Mean	Valid N
Supported Agencies	ACD-Agriculture & Construction Development	49.71	63
	CARE International	50.43	97
	NAC-Norwegian Afghanistan Committee/ UNICEF	48.95	38
	OI-Ockenden International	56.00	1
	SCA-Swedish Committee for Afghanistan	47.85	273
	SC USA-Save the Children USA	46.05	119
	Total	48.20	591
	Type of School (Boys/Girls/Mixed)		
	Boys school	47.89	145
	Girls school	47.84	152
	Mixed school	48.16	255
Total		48.00	552
School Calander	Cold season	47.25	352
	Hot season	47.60	99
	School open all year	52.24	83
	Other	45.33	18
	Total		48.00
Province where school located	Badakhshan	49.08	48
	Ghazi	48.44	146
	Kabul	49.71	63
	Kunar	49.41	74
	Paktia (Khost)	45.33	18
	Takhar	47.33	83
	Balochistan (Pakistan)	46.05	119
	NWFP (Pakistan)	56.00	1
Total		48.00	552
Language/medum of instruction in the school	Pashto	47.39	314
	Dari	48.81	238
Total		48.00	552
School Facilities	Building	47.67	398
	Tent	46.00	10
	Open air	49.13	53
	Other	49.01	91
	Total		48.00

LOWER MILLDE ACHIEVEMENT PERCENTILE(33+ to 60%) - SCHOOL/ TEACHERS BY MARKS (%)

		MARKS TAKEN (%)	
		Mean	Valid N
Class (tested) facilities	Classroom (inside)	48.17	379
	Tent	50.12	17
	Open air	46.76	100
	Other	48.43	56
	Total	48.00	552
Class size	1 - 10 students	53.00	4
	11 - 20 students	48.25	145
	21 - 30 students	47.22	108
	31 - 40 students	48.11	248
	41 or more students(please specify #)	48.00	47
	Total	48.00	552
Type of textbook used by the teacher for Maths	UNO revised	50.34	145
	SCA books	47.04	225
	GTZ/ BEFARc	46.05	119
	Other (please specify)	49.71	63
	Total	48.00	552
Availability of mathemtics textbooks for students	All students have the book	47.51	468
	More than half	52.00	9
	less than half	53.92	25
	None of the students	48.88	50
Total	48.00	552	
Indicate teacher's sex	Male	47.78	378
	Female	48.48	174
Total	48.00	552	
What is your (teacher) age?	Under 20 years	50.29	21
	21 - 30 years	49.46	153
	31 - 40 years	47.32	213
	41 - 50 years	47.62	156
	51 years & over	40.44	9
	Total	48.00	552
What is your highest academic qualification?	Completed primary	44.00	27
	Completed middle school (G 9)	48.00	49
	Completed lice (G 12)	48.01	340
	BA/ BSc	49.97	75
	Other	46.60	40
	No Info.	48.57	21
Total	48.00	552	
Provide information about type of professional training you	No professional training	48.18	195
	Teacher training high School (12th G)	47.78	37
	Teacher training Institute (14th G)	48.78	67
	Institute of Pedagogy (16th G)	54.59	17
	Other (please specify)	47.42	173
	No Info.	46.54	63
Total	48.00	552	
Provide the # of years of experience you have in teaching pr	Less than 1 year	47.11	63
	1 - 5 years	49.32	227
	6 - 10 years	47.96	105
	11 - 20 years	46.56	117
	21 or more years	49.60	25
	No info.	40.53	15
Total	48.00	552	

UPPER MILLDE ACHIEVEMENT PERCENTILE(60+ tp 80%) - SCHOOL/ TEACHERS BY MARKS (%)

		MARKS TAKEN (%)	
		Mean	Valid N
Supported Agencies	ACD-Agriculture & Construction Development	72.56	64
	CARE International	72.55	80
	NAC-Norwegian Afghanistan Commitee/ UNICEF	70.40	15
	OI-Ockenden International	76.61	33
	SCA-Swedish Committee for Afghanistan	71.09	158
	SC USA-Save the Children USA	69.79	47
	Total		71.90
Type of School (Boys/Girls/Mixed)	Boys school	73.00	88
	Girls school	71.14	88
	Mixed school	71.69	195
	Total		71.87
School Calander	Cold season	71.51	205
	Hot season	71.43	49
	School open all year	72.84	109
	Other	70.50	8
	Total		71.87
Province where school located	Badakhshan	71.37	19
	Ghazi	70.77	91
	Kabul	72.56	64
	Kunar	72.25	65
	Paktia (Khost)	70.50	8
	Takhar	71.73	44
	Balochistan (Pakistan)	69.79	47
	NWFP (Pakistan)	76.61	33
Total		71.87	371
Language/medum of instruction in the school	Pashto	72.17	206
	Dari	71.49	165
Total		71.87	371
School Facilities	Building	71.78	249
	Tent	75.33	12
	Open air	72.70	46
	Other	70.92	63
	No info.	76.00	1
	Total		71.87
Class (tested) facilities	Classroom (inside)	71.80	265
	Tent	74.29	21
	Open air	71.56	45
	Other	71.40	40
Total		71.87	371
Class size	1 - 10 students	73.33	6
	11 - 20 students	71.57	102
	21 - 30 students	70.83	72
	31 - 40 students	72.56	151
	41 or more students(please specify #)	71.70	40
	Total		71.87
Type of textbook used by the teacher for Maths	UNO revised	73.20	160
	SCA books	70.28	100
	GTZ/ BEFARc	69.79	47
	Other (please specify)	72.56	64
Total		71.87	371
Availability of mathemtics textbooks for students	All students have the book	71.47	272
	More than half	75.67	12
	less than half	73.71	56
	None of the students	70.58	31

UPPER MILLDE ACHIEVEMENT PERCENTILE(60+ tp 80%) - SCHOOL/ TEACHERS BY MARKS (%)

		MARKS TAKEN (%)	
		Mean	Valid N
Total		71.87	371
Indicate teacher's sex	Male	72.11	249
	Female	71.38	122
Total		71.87	371
What is your (teacher) age?	Under 20 years	71.25	16
	21 - 30 years	71.40	126
	31 - 40 years	72.66	128
	41 - 50 years	71.56	101
Total		71.87	371
What is your highest academic qualification?	Completed primary	70.00	8
	Completed middle school (G 9)	68.47	34
	Completed lice (G 12)	72.36	220
	BA/ BSc	72.47	76
	Other	70.33	12
	No Info.	71.62	21
Total		71.87	371
Provide information about type of professional training you	No professional training	72.06	124
	Teacher training high School (12th G)	74.69	49
	Teacher training Institute (14th G)	69.87	30
	Institute of Pedagogy (16th G)	74.10	40
	Other (please specify)	70.59	102
	No Info.	69.54	26
Total		71.87	371
Provide the # of years of experience you have in teaching pr	Less than 1 year	71.90	40
	1 - 5 years	71.35	172
	6 - 10 years	72.73	60
	11 - 20 years	70.79	66
	21 or more years	75.15	33
Total		71.87	371

HIGHEST ACHIEVEMENT PERCENTILE(80+ to 100%) - SCHOOL/ TEACHERS BY MARKS (%)

		MARKS TAKEN (%)		
		Mean	Valid N	
Supported Agencies	ACD-Agriculture & Construction Development	89.05	61	
	CARE International	87.50	24	
	NAC-Norwegian Afghanistan Committee/ UNICEF	88.00	1	
	OI-Ockenden International	93.34	191	
	SCA-Swedish Committee for Afghanistan	85.18	44	
	SC USA-Save the Children USA	88.36	11	
	Total		90.87	332
	Type of School (Boys/Girls/Mixed)	Boys school	88.93	95
Girls school		92.87	124	
Mixed school		90.36	107	
Total		90.90	326	
School Calander	Cold season	88.22	110	
	Hot season	94.39	137	
	School open all year	88.63	76	
	Other	86.67	3	
Total		90.90	326	

HIGHEST ACHIEVEMENT PERCENTILE(80+ to 100%) - SCHOOL/ TEACHERS BY MARKS (%)

		MARKS TAKEN (%)	
		Mean	Valid N
Province where school located	Badakhshan	85.60	5
	Ghazi	86.59	17
	Kabul	89.05	61
	Kunar	84.90	31
	Paktia (Khost)	86.67	3
	Takhar	86.86	7
	Balochistan (Pakistan)	88.36	11
	NWFP (Pakistan)	93.34	191
Total		90.90	326
Language/medum of instruction in the school	Pashto	91.32	234
	Dari	89.83	92
Total		90.90	326
School Facilities	Building	90.73	233
	Tent	85.67	12
	Open air	90.63	32
	Other	92.13	32
	No info.	95.06	17
Total		90.90	326
Class (tested) facilities	Classroom (inside)	91.37	272
	Tent	85.43	14
	Open air	91.07	30
	Other	85.20	10
Total		90.90	326
Class size	1 - 10 students	88.00	3
	11 - 20 students	92.86	167
	21 - 30 students	92.52	46
	31 - 40 students	87.12	86
	41 or more students(please specify #)	88.00	24
Total		90.90	326
Type of textbook used by the teacher for Maths	UNO revised	91.85	238
	SCA books	85.50	16
	GTZ/ BEFARc	88.36	11
	Other (please specify)	89.05	61
Total		90.90	326
Availability of mathemtics textbooks for students	All students have the book	91.51	251
	More than half less than half	88.00	5
	None of the students	88.93	60
		88.80	10
Total		90.90	326
Indicate teacher's sex	Male	89.12	165
	Female	92.72	161
Total		90.90	326
What is your (teacher) age?	Under 20 years	94.78	23
	21 - 30 years	91.59	164
	31 - 40 years	88.73	77
	41 - 50 years	90.32	62
Total		90.90	326
What is your highest academic qualification?	Completed middle school (G 9)	91.85	27
	Completed lice (G 12)	90.71	204
	BA/ BSc	91.18	88
	Other	88.00	2
	No Info.	89.60	5
Total		90.90	326

HIGHEST ACHIEVEMENT PERCENTILE(80+ to 100%) - SCHOOL/ TEACHERS BY MARKS (%)

		MARKS TAKEN (%)	
		Mean	Valid N
Provide information about type of professional training you	No professional training	88.60	87
	Emergency TTS (10th G)	93.26	19
	Teacher training high School (12th G)	89.97	69
	Teacher training Institute (14th G)	94.11	38
	Institute of Pedagogy (16th G)	90.85	52
	Other (please specify)	92.11	38
	No Info.	93.22	23
Total		90.90	326
Provide the # of years of experience you have in teaching pr	Less than 1 year	93.78	65
	1 - 5 years	90.86	147
	6 - 10 years	84.96	25
	11 - 20 years	91.47	60
	21 or more years	88.55	29
Total		90.90	326

MARKSR

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Upto 35%	421	24.2	24.2	24.2
35+ to 60%	591	33.9	33.9	58.1
60+ to 80%	397	22.8	22.8	80.9
80+ to 100%	332	19.1	19.1	100.0
Total	1741	100.0	100.0	

Crosstabs

MARKSR * Student's Sex Crosstabulation

			Student's Sex		Total
			Boys	Girls	
MARKSR Upto 35%	Count		260	161	421
	% within MARKSR		61.8%	38.2%	100.0%
	% within Student's Sex		27.4%	20.3%	24.2%
35+ to 60%	Count		317	274	591
	% within MARKSR		53.6%	46.4%	100.0%
	% within Student's Sex		33.4%	34.6%	33.9%
60+ to 80%	Count		214	183	397
	% within MARKSR		53.9%	46.1%	100.0%
	% within Student's Sex		22.6%	23.1%	22.8%
80+ to 100%	Count		157	175	332
	% within MARKSR		47.3%	52.7%	100.0%
	% within Student's Sex		16.6%	22.1%	19.1%
Total	Count		948	793	1741
	% within MARKSR		54.5%	45.5%	100.0%
	% within Student's Sex		100.0%	100.0%	100.0%

Means

Report

Student's Sex		PLACE VALUE (%)	ADDITION (%)	SUBTRACTION (%)	MULTIPLICATION (%)	DIVISION (%)
Boys	Mean	54.3249	53.1294	48.8397	56.4346	54.0436
	N	948	948	948	948	948
	Std. Deviation	28.0437	34.9426	36.1508	36.3744	35.3831
Girls	Mean	64.5019	56.4943	46.9945	58.2177	58.5120
	N	793	793	793	793	793
	Std. Deviation	27.6266	34.3725	35.0525	36.4312	36.7091
Total	Mean	58.9604	54.6621	47.9992	57.2468	56.0789
	N	1741	1741	1741	1741	1741
	Std. Deviation	28.3043	34.7146	35.6564	36.4007	36.0515

Report

Student's Sex		FRACTIONS (%)	MESUREMENTS (%)
Boys	Mean	45.2180	54.5007
	N	948	948
	Std. Deviation	33.2009	31.4538
Girls	Mean	52.7112	61.0971
	N	793	793
	Std. Deviation	34.7551	31.9825
Total	Mean	48.6311	57.5053
	N	1741	1741
	Std. Deviation	34.1127	31.8565

Tables

Mean-percentage math ability by location and gender

		Student's Sex		Total
		Boys	Girls	
PLACE VALUE (%)	Mean	54.32	64.50	58.96
	Valid N	948	793	1741
ADDITION (%)	Mean	53.13	56.49	54.66
	Valid N	948	793	1741
SUBTRACTION (%)	Mean	48.84	46.99	48.00
	Valid N	948	793	1741
MULTIPLICATION (%)	Mean	56.43	58.22	57.25
	Valid N	948	793	1741
DIVISION (%)	Mean	54.04	58.51	56.08
	Valid N	948	793	1741
FRACTIONS (%)	Mean	45.22	52.71	48.63
	Valid N	948	793	1741
MESUREMENTS (%)	Mean	54.50	61.10	57.51
	Valid N	948	793	1741

mean-percentage math ability by location and Agency

		LOCATION OF SCHOOL (URBAN/RURAL)		
		Urban	Rural	Refugee village
PLACE VALUE (%)	Mean	46.10	58.00	72.46
	Valid N	410	878	453
ADDITION (%)	Mean	51.22	48.97	68.80
	Valid N	410	878	453
SUBTRACTION (%)	Mean	39.27	44.91	61.88
	Valid N	410	878	453
MULTIPLICATION (%)	Mean	52.28	54.44	67.18
	Valid N	410	878	453
DIVISION (%)	Mean	45.12	53.08	71.82
	Valid N	410	878	453
FRACTIONS (%)	Mean	42.11	45.41	60.78
	Valid N	410	878	453
MESUREMENTS (%)	Mean	45.61	53.89	75.28
	Valid N	410	878	453

mean-percentage math ability by location and Agency

		Supported Agencies			
		ACD-Agriculture & Construction Development	CARE International	NAC-Norwegian Afghanistan Committee/ UNICEF	OI-Ockenden International
PLACE VALUE (%)	Mean	56.10	57.94	35.70	92.67
	Valid N	209	233	201	225
ADDITION (%)	Mean	67.30	60.94	34.49	93.19
	Valid N	209	233	201	225
SUBTRACTION (%)	Mean	55.50	47.50	22.39	84.00
	Valid N	209	233	201	225
MULTIPLICATION (%)	Mean	75.12	66.95	28.52	86.96
	Valid N	209	233	201	225
DIVISION (%)	Mean	67.78	66.24	21.56	90.37
	Valid N	209	233	201	225
FRACTIONS (%)	Mean	65.87	47.35	17.41	87.41
	Valid N	209	233	201	225
MESUREMENTS (%)	Mean	70.73	59.87	19.49	95.26
	Valid N	209	233	201	225

mean-percentage math ability by location and Agency

		Supported Agencies		Total
		SCA-Swedish Committee for Afghanistan	SC USA-Save the Children USA	
PLACE VALUE (%)	Mean	58.02	52.52	58.96
	Valid N	645	228	1741
ADDITION (%)	Mean	44.65	44.74	54.66
	Valid N	645	228	1741
SUBTRACTION (%)	Mean	43.98	40.06	48.00
	Valid N	645	228	1741
MULTIPLICATION (%)	Mean	49.92	47.66	57.25
	Valid N	645	228	1741
DIVISION (%)	Mean	48.32	53.51	56.08
	Valid N	645	228	1741
FRACTIONS (%)	Mean	44.70	34.50	48.63
	Valid N	645	228	1741
MESUREMENTS (%)	Mean	51.73	55.56	57.51
	Valid N	645	228	1741

mean-percentage math ability by location and Area/ Region

		AREA WHERE SCHOOL IS LOCATED					
		Badakshan	Ghazni	Kabul	Kunar	Paktia	Wardak
PLACE VALUE (%)	Mean	35.70	51.40	56.10	70.09	66.78	53.17
	Valid N	201	376	209	229	76	197
ADDITION (%)	Mean	34.49	56.56	67.30	39.45	43.86	47.55
	Valid N	201	376	209	229	76	197
SUBTRACTION (%)	Mean	22.39	42.91	55.50	46.72	40.79	48.22
	Valid N	201	376	209	229	76	197
MULTIPLICATION (%)	Mean	28.52	56.29	75.12	54.00	62.72	48.22
	Valid N	201	376	209	229	76	197
DIVISION (%)	Mean	21.56	53.81	67.78	54.59	54.82	49.24
	Valid N	201	376	209	229	76	197
FRACTIONS (%)	Mean	17.41	48.40	65.87	45.41	42.54	40.78
	Valid N	201	376	209	229	76	197
MESUREMENTS (%)	Mean	19.49	50.89	70.73	55.46	54.39	57.61
	Valid N	201	376	209	229	76	197

mean-percentage math ability by location and Area/ Region

		AREA WHERE SCHOOL IS LOCATED		Total
		Balochistan	NWFP	
PLACE VALUE (%)	Mean	52.52	92.67	58.96
	Valid N	228	225	1741
ADDITION (%)	Mean	44.74	93.19	54.66
	Valid N	228	225	1741
SUBTRACTION (%)	Mean	40.06	84.00	48.00
	Valid N	228	225	1741
MULTIPLICATION (%)	Mean	47.66	86.96	57.25
	Valid N	228	225	1741
DIVISION (%)	Mean	53.51	90.37	56.08
	Valid N	228	225	1741
FRACTIONS (%)	Mean	34.50	87.41	48.63
	Valid N	228	225	1741
MESUREMENTS (%)	Mean	55.56	95.26	57.51
	Valid N	228	225	1741

mean-percentage math ability by language spoken at home

		LANGUAGE SPOKEN AT HOME				Total
		Pashto	Dari	Uzbaki	Persian (farsi)	
PLACE VALUE (%)	Mean	66.90	49.22	38.64	50.96	58.96
	Valid N	963	741	11	26	1741
ADDITION (%)	Mean	55.07	54.03	63.64	53.85	54.66
	Valid N	963	741	11	26	1741
SUBTRACTION (%)	Mean	53.51	41.03	60.61	37.18	48.00
	Valid N	963	741	11	26	1741
MULTIPLICATION (%)	Mean	59.92	53.80	60.61	55.13	57.25
	Valid N	963	741	11	26	1741
DIVISION (%)	Mean	61.65	49.62	48.48	37.18	56.08
	Valid N	963	741	11	26	1741
FRACTIONS (%)	Mean	51.68	44.76	36.36	51.28	48.63
	Valid N	963	741	11	26	1741
MESUREMENTS (%)	Mean	65.06	48.52	30.30	45.51	57.51
	Valid N	963	741	11	26	1741

mean-percentage math ability by location and Agency

		LOCATION OF SCHOOL (URBAN/RURAL)		
		Urban	Rural	Refugee village
PLACE VALUE (%)	Mean	46.10	58.00	72.46
	Valid N	410	878	453
ADDITION (%)	Mean	51.22	48.97	68.80
	Valid N	410	878	453
SUBTRACTION (%)	Mean	39.27	44.91	61.88
	Valid N	410	878	453
MULTIPLICATION (%)	Mean	52.28	54.44	67.18
	Valid N	410	878	453
DIVISION (%)	Mean	45.12	53.08	71.82
	Valid N	410	878	453
FRACTIONS (%)	Mean	42.11	45.41	60.78
	Valid N	410	878	453
MESUREMENTS (%)	Mean	45.61	53.89	75.28
	Valid N	410	878	453

mean-percentage math ability by location and Agency

		Supported Agencies			
		ACD-Agriculture & Construction Development	CARE International	NAC-Norwegian Afghanistan Committee/ UNICEF	OI-Ockenden International
PLACE VALUE (%)	Mean	56.10	57.94	35.70	92.67
	Valid N	209	233	201	225
ADDITION (%)	Mean	67.30	60.94	34.49	93.19
	Valid N	209	233	201	225
SUBTRACTION (%)	Mean	55.50	47.50	22.39	84.00
	Valid N	209	233	201	225
MULTIPLICATION (%)	Mean	75.12	66.95	28.52	86.96
	Valid N	209	233	201	225
DIVISION (%)	Mean	67.78	66.24	21.56	90.37
	Valid N	209	233	201	225
FRACTIONS (%)	Mean	65.87	47.35	17.41	87.41
	Valid N	209	233	201	225
MESUREMENTS (%)	Mean	70.73	59.87	19.49	95.26
	Valid N	209	233	201	225

mean-percentage math ability by location and Agency

		Supported Agencies		
		SCA-Swedish Committee for Afghanistan	SC USA-Save the Children USA	Total
PLACE VALUE (%)	Mean	58.02	52.52	58.96
	Valid N	645	228	1741
ADDITION (%)	Mean	44.65	44.74	54.66
	Valid N	645	228	1741
SUBTRACTION (%)	Mean	43.98	40.06	48.00
	Valid N	645	228	1741
MULTIPLICATION (%)	Mean	49.92	47.66	57.25
	Valid N	645	228	1741
DIVISION (%)	Mean	48.32	53.51	56.08
	Valid N	645	228	1741
FRACTIONS (%)	Mean	44.70	34.50	48.63
	Valid N	645	228	1741
MESUREMENTS (%)	Mean	51.73	55.56	57.51
	Valid N	645	228	1741

mean-percentage math ability by Type of School (boys/girls/mixed)

		Type of School (Boys/Girls/Mixed)			Total
		Boys school	Girls school	Mixed school	
PLACE VALUE (%)	Mean	55.32	69.55	54.78	58.87
	Valid N	442	445	779	1666
ADDITION (%)	Mean	55.35	58.80	51.01	54.24
	Valid N	442	445	779	1666
SUBTRACTION (%)	Mean	52.04	49.44	45.27	48.18
	Valid N	442	445	779	1666
MULTIPLICATION (%)	Mean	55.05	58.95	55.97	56.52
	Valid N	442	445	779	1666
DIVISION (%)	Mean	53.47	58.88	54.90	55.58
	Valid N	442	445	779	1666
FRACTIONS (%)	Mean	47.06	56.70	45.27	48.80
	Valid N	442	445	779	1666
MESUREMENTS (%)	Mean	56.22	63.48	54.34	57.28
	Valid N	442	445	779	1666

mean-percentage math ability by School Calander

		School Calander				Total
		Cold season	Hot season	School open all year	Other	
PLACE VALUE (%)	Mean	53.99	74.85	57.38	63.46	58.87
	Valid N	1014	325	288	39	1666
ADDITION (%)	Mean	46.38	66.36	71.18	32.48	54.24
	Valid N	1014	325	288	39	1666
SUBTRACTION (%)	Mean	42.18	58.05	59.26	40.17	48.18
	Valid N	1014	325	288	39	1666
MULTIPLICATION (%)	Mean	48.16	66.56	75.23	52.14	56.52
	Valid N	1014	325	288	39	1666
DIVISION (%)	Mean	44.77	73.85	74.31	46.15	55.58
	Valid N	1014	325	288	39	1666
FRACTIONS (%)	Mean	40.11	61.54	65.97	41.88	48.80
	Valid N	1014	325	288	39	1666
MESUREMENTS (%)	Mean	49.00	71.33	71.53	50.43	57.28
	Valid N	1014	325	288	39	1666

mean-percentage math ability by Province in which school is located

		Province where school located					
		Badakhshan	Ghazi	Kabul	Kunar	Paktia (Khost)	Takhar
PLACE VALUE (%)	Mean	39.03	51.33	56.10	70.09	63.46	50.99
	Valid N	221	338	209	229	39	177
ADDITION (%)	Mean	36.65	54.83	67.30	39.45	32.48	46.33
	Valid N	221	338	209	229	39	177
SUBTRACTION (%)	Mean	24.59	42.50	55.50	46.72	40.17	48.40
	Valid N	221	338	209	229	39	177
MULTIPLICATION (%)	Mean	31.83	54.44	75.12	54.00	52.14	46.33
	Valid N	221	338	209	229	39	177
DIVISION (%)	Mean	24.13	51.97	67.78	54.59	46.15	49.15
	Valid N	221	338	209	229	39	177
FRACTIONS (%)	Mean	22.02	48.62	65.87	45.41	41.88	37.66
	Valid N	221	338	209	229	39	177
MESUREMENTS (%)	Mean	22.70	49.16	70.73	55.46	50.43	57.91
	Valid N	221	338	209	229	39	177

mean-percentage math ability by Province in which school is located

		Province where school located		Total
		Balochistan (Pakistan)	NWFP (Pakistan)	
PLACE VALUE (%)	Mean	52.52	92.67	58.87
	Valid N	228	225	1666
ADDITION (%)	Mean	44.74	93.19	54.24
	Valid N	228	225	1666
SUBTRACTION (%)	Mean	40.06	84.00	48.18
	Valid N	228	225	1666
MULTIPLICATION (%)	Mean	47.66	86.96	56.52
	Valid N	228	225	1666
DIVISION (%)	Mean	53.51	90.37	55.58
	Valid N	228	225	1666
FRACTIONS (%)	Mean	34.50	87.41	48.80
	Valid N	228	225	1666
MESUREMENTS (%)	Mean	55.56	95.26	57.28
	Valid N	228	225	1666

mean-percentage math ability by language/Medium of Instruction at school

		Language/medum of instruction in the school		Total
		Pashto	Dari	
PLACE VALUE (%)	Mean	66.72	49.16	58.87
	Valid N	921	745	1666
ADDITION (%)	Mean	54.72	53.65	54.24
	Valid N	921	745	1666
SUBTRACTION (%)	Mean	53.60	41.48	48.18
	Valid N	921	745	1666
MULTIPLICATION (%)	Mean	58.74	53.78	56.52
	Valid N	921	745	1666
DIVISION (%)	Mean	60.88	49.04	55.58
	Valid N	921	745	1666
FRACTIONS (%)	Mean	51.03	46.04	48.80
	Valid N	921	745	1666
MESUREMENTS (%)	Mean	64.75	48.05	57.28
	Valid N	921	745	1666

mean-percentage math ability by School Facilities

		School Facilities					Total
		Building	Tent	Open air	Other	No info.	
PLACE VALUE (%)	Mean	56.42	69.38	53.23	72.86	95.83	58.87
	Valid N	1212	40	186	210	18	1666
ADDITION (%)	Mean	53.93	67.50	52.33	51.59	96.30	54.24
	Valid N	1212	40	186	210	18	1666
SUBTRACTION (%)	Mean	47.25	51.67	49.46	48.57	85.19	48.18
	Valid N	1212	40	186	210	18	1666
MULTIPLICATION (%)	Mean	55.69	55.00	57.53	58.25	85.19	56.52
	Valid N	1212	40	186	210	18	1666
DIVISION (%)	Mean	54.10	65.00	54.30	59.68	100.00	55.58
	Valid N	1212	40	186	210	18	1666
FRACTIONS (%)	Mean	46.62	74.17	49.28	52.38	92.59	48.80
	Valid N	1212	40	186	210	18	1666
MESUREMENTS (%)	Mean	56.17	64.58	52.69	62.86	98.15	57.28
	Valid N	1212	40	186	210	18	1666

mean-percentage math ability by Class Size

		Class size					Total
		1 - 10 students	11 - 20 students	21 - 30 students	31 - 40 students	41 or more students (please specify #)	
PLACE VALUE (%)	Mean	55.00	61.87	61.18	56.91	52.12	58.87
	Valid N	15	552	302	644	153	1666
ADDITION (%)	Mean	55.56	59.96	49.45	52.38	50.76	54.24
	Valid N	15	552	302	644	153	1666
SUBTRACTION (%)	Mean	44.44	51.33	46.36	45.60	51.63	48.18
	Valid N	15	552	302	644	153	1666
MULTIPLICATION (%)	Mean	73.33	62.26	53.53	52.48	57.08	56.52
	Valid N	15	552	302	644	153	1666
DIVISION (%)	Mean	77.78	58.64	54.64	53.57	52.72	55.58
	Valid N	15	552	302	644	153	1666
FRACTIONS (%)	Mean	55.56	53.62	46.58	45.39	49.46	48.80
	Valid N	15	552	302	644	153	1666
MESUREMENTS (%)	Mean	77.78	61.26	55.74	54.45	55.88	57.28
	Valid N	15	552	302	644	153	1666

mean-percentage math ability by Type of Textbooks used

		Type of textbook used by the teacher for Maths				Total
		UNO revised	SCA books	GTZ/ BEFARc	Other (please specify)	
PLACE VALUE (%)	Mean	68.57	49.17	52.52	56.10	58.87
	Valid N	719	510	228	209	1666
ADDITION (%)	Mean	61.57	42.81	44.74	67.30	54.24
	Valid N	719	510	228	209	1666
SUBTRACTION (%)	Mean	54.24	40.26	40.06	55.50	48.18
	Valid N	719	510	228	209	1666
MULTIPLICATION (%)	Mean	61.66	45.62	47.66	75.12	56.52
	Valid N	719	510	228	209	1666
DIVISION (%)	Mean	61.85	42.68	53.51	67.78	55.58
	Valid N	719	510	228	209	1666
FRACTIONS (%)	Mean	52.80	42.55	34.50	65.87	48.80
	Valid N	719	510	228	209	1666
MESUREMENTS (%)	Mean	61.38	46.76	55.56	70.73	57.28
	Valid N	719	510	228	209	1666

mean-percentage math ability by Availability of Mathematics Books

		Availability of mathematics textbooks for students				Total
		All students have the book	More than half	less than half	None of the students	
PLACE VALUE (%)	Mean	59.48	55.41	64.04	45.76	58.87
	Valid N	1371	37	146	112	1666
ADDITION (%)	Mean	51.37	66.67	76.94	55.65	54.24
	Valid N	1371	37	146	112	1666
SUBTRACTION (%)	Mean	46.32	55.86	71.46	38.10	48.18
	Valid N	1371	37	146	112	1666
MULTIPLICATION (%)	Mean	52.93	60.36	82.88	64.88	56.52
	Valid N	1371	37	146	112	1666
DIVISION (%)	Mean	52.61	63.06	81.51	55.65	55.58
	Valid N	1371	37	146	112	1666
FRACTIONS (%)	Mean	46.12	43.24	74.20	50.30	48.80
	Valid N	1371	37	146	112	1666
MESUREMENTS (%)	Mean	55.06	49.55	76.26	62.35	57.28
	Valid N	1371	37	146	112	1666

mean-percentage math ability by Teacher's Gender

		Indicate teacher's sex		Total
		Male	Female	
PLACE VALUE (%)	Mean	58.05	60.19	58.87
	Valid N	1028	638	1666
ADDITION (%)	Mean	53.96	54.70	54.24
	Valid N	1028	638	1666
SUBTRACTION (%)	Mean	48.99	46.87	48.18
	Valid N	1028	638	1666
MULTIPLICATION (%)	Mean	57.59	54.81	56.52
	Valid N	1028	638	1666
DIVISION (%)	Mean	55.64	55.49	55.58
	Valid N	1028	638	1666
FRACTIONS (%)	Mean	47.89	50.26	48.80
	Valid N	1028	638	1666
MESUREMENTS (%)	Mean	56.81	58.05	57.28
	Valid N	1028	638	1666

mean-percentage math ability by Teacher's Age

		What is your (teacher) age?					Total
		Under 20 years	21 - 30 years	31 - 40 years	41 - 50 years	51 years & over	
PLACE VALUE (%)	Mean	70.14	60.08	56.82	58.79	40.00	58.87
	Valid N	72	615	561	398	20	1666
ADDITION (%)	Mean	62.04	55.39	50.80	56.70	38.33	54.24
	Valid N	72	615	561	398	20	1666
SUBTRACTION (%)	Mean	55.09	47.21	47.71	50.17	26.67	48.18
	Valid N	72	615	561	398	20	1666
MULTIPLICATION (%)	Mean	65.28	57.29	54.01	59.05	21.67	56.52
	Valid N	72	615	561	398	20	1666
DIVISION (%)	Mean	75.93	57.67	51.34	55.78	33.33	55.58
	Valid N	72	615	561	398	20	1666
FRACTIONS (%)	Mean	58.33	50.79	43.37	53.02	21.67	48.80
	Valid N	72	615	561	398	20	1666
MESUREMENTS (%)	Mean	56.71	59.38	57.13	55.36	37.50	57.28
	Valid N	72	615	561	398	20	1666

mean-percentage math ability by Teachers highest Academic Qualification

		What is your highest academic qualification?						Total
		Completed primary	Completed middle school (G 9)	Completed lice (G 12)	BA/ BSc	Other	No Info.	
PLACE VALUE (%)	Mean	64.38	55.43	61.22	62.06	42.98	50.38	58.87
	Valid N	40	152	1005	257	146	66	1666
ADDITION (%)	Mean	40.00	57.46	53.63	69.00	32.42	55.56	54.24
	Valid N	40	152	1005	257	146	66	1666
SUBTRACTION (%)	Mean	37.50	45.83	49.62	59.79	26.48	40.91	48.18
	Valid N	40	152	1005	257	146	66	1666
MULTIPLICATION (%)	Mean	38.33	55.48	56.85	71.73	30.59	63.13	56.52
	Valid N	40	152	1005	257	146	66	1666
DIVISION (%)	Mean	61.67	49.56	56.42	73.41	25.80	49.49	55.58
	Valid N	40	152	1005	257	146	66	1666
FRACTIONS (%)	Mean	40.00	53.07	48.19	67.32	21.00	42.93	48.80
	Valid N	40	152	1005	257	146	66	1666
MESUREMENTS (%)	Mean	43.75	53.84	58.06	75.42	27.05	57.83	57.28
	Valid N	40	152	1005	257	146	66	1666

mean-percentage math ability by Professional Training received by a Teacher

		LOCATION OF SCHOOL (URBAN/RURAL)		
		Urban	Rural	Refugee village
PLACE VALUE (%)	Mean	46.10	58.00	72.46
	Valid N	410	878	453
ADDITION (%)	Mean	51.22	48.97	68.80
	Valid N	410	878	453
SUBTRACTION (%)	Mean	39.27	44.91	61.88
	Valid N	410	878	453
MULTIPLICATION (%)	Mean	52.28	54.44	67.18
	Valid N	410	878	453
DIVISION (%)	Mean	45.12	53.08	71.82
	Valid N	410	878	453
FRACTIONS (%)	Mean	42.11	45.41	60.78
	Valid N	410	878	453
MESUREMENTS (%)	Mean	45.61	53.89	75.28
	Valid N	410	878	453

mean-percentage math ability by Professional Training received by a Teacher

		Provide information about type of professional training you				
		No professional training	Emergency TTS (10th G)	Teacher training high School (12th G)	Teacher training Institute (14th G)	Institute of Pedagogy (16th G)
PLACE VALUE (%)	Mean	66.35	100.00	69.67	50.11	65.32
	Valid N	520	19	183	225	111
ADDITION (%)	Mean	47.50	94.74	72.31	46.37	81.38
	Valid N	520	19	183	225	111
SUBTRACTION (%)	Mean	46.92	78.95	66.12	36.74	74.47
	Valid N	520	19	183	225	111
MULTIPLICATION (%)	Mean	53.14	91.23	65.03	47.41	86.49
	Valid N	520	19	183	225	111
DIVISION (%)	Mean	54.36	98.25	65.94	45.78	83.48
	Valid N	520	19	183	225	111
FRACTIONS (%)	Mean	49.49	92.98	56.83	42.96	75.38
	Valid N	520	19	183	225	111
MESUREMENTS (%)	Mean	59.23	93.86	68.67	50.07	80.93
	Valid N	520	19	183	225	111

mean-percentage math ability by Professional Training received by a Teacher

		Provide information about type of professional training you		
		Other (please specify)	No Info.	Total
PLACE VALUE (%)	Mean	48.20	56.25	58.87
	Valid N	472	136	1666
ADDITION (%)	Mean	49.79	56.37	54.24
	Valid N	472	136	1666
SUBTRACTION (%)	Mean	41.74	44.36	48.18
	Valid N	472	136	1666
MULTIPLICATION (%)	Mean	52.75	56.86	56.52
	Valid N	472	136	1666
DIVISION (%)	Mean	48.66	57.84	55.58
	Valid N	472	136	1666
FRACTIONS (%)	Mean	40.11	47.30	48.80
	Valid N	472	136	1666
MESUREMENTS (%)	Mean	46.08	60.91	57.28
	Valid N	472	136	1666

mean-percentage math ability by year of experience (teaching primary)

		Provide the # of years of experience you have in teaching pr						Total
		Less than 1 year	1 - 5 years	6 - 10 years	11 - 20 years	21 or more years	No info.	
PLACE VALUE (%)	Mean	67.86	59.87	51.32	59.40	60.68	46.25	58.87
	Valid N	196	709	340	298	103	20	1666
ADDITION (%)	Mean	67.18	54.40	39.41	58.50	68.28	38.33	54.24
	Valid N	196	709	340	298	103	20	1666
SUBTRACTION (%)	Mean	58.33	46.73	39.22	50.78	63.43	35.00	48.18
	Valid N	196	709	340	298	103	20	1666
MULTIPLICATION (%)	Mean	65.99	57.78	43.73	59.40	69.90	25.00	56.52
	Valid N	196	709	340	298	103	20	1666
DIVISION (%)	Mean	68.03	59.29	37.35	56.49	67.31	38.33	55.58
	Valid N	196	709	340	298	103	20	1666
FRACTIONS (%)	Mean	57.31	49.79	36.08	53.02	59.55	28.33	48.80
	Valid N	196	709	340	298	103	20	1666
MESUREMENTS (%)	Mean	64.20	61.33	43.87	56.88	65.05	40.00	57.28
	Valid N	196	709	340	298	103	20	1666

Frequency Table - Contents Areas (Categorised)

PLACE VALUE (%)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Upto 33%	422	24.2	24.2	24.2
33+ to 60%	505	29.0	29.0	53.2
60+ to 80%	495	28.4	28.4	81.7
80+ to 100%	319	18.3	18.3	100.0
Total	1741	100.0	100.0	

ADDITION (%)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Upto 33%	298	17.1	17.1	17.1
33+ to 60%	476	27.3	27.3	44.5
60+ to 80%	522	30.0	30.0	74.4
80+ to 100%	445	25.6	25.6	100.0
Total	1741	100.0	100.0	

SUBTRACTION (%)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Upto 33%	421	24.2	24.2	24.2
33+ to 60%	493	28.3	28.3	52.5
60+ to 80%	467	26.8	26.8	79.3
80+ to 100%	360	20.7	20.7	100.0
Total	1741	100.0	100.0	

MULTIPLICATION (%)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Upto 33%	319	18.3	18.3	18.3
33+ to 60%	396	22.7	22.7	41.1
60+ to 80%	484	27.8	27.8	68.9
80+ to 100%	542	31.1	31.1	100.0
Total	1741	100.0	100.0	

DIVISION (%)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Upto 33%	321	18.4	18.4	18.4
33+ to 60%	419	24.1	24.1	42.5
60+ to 80%	493	28.3	28.3	70.8
80+ to 100%	508	29.2	29.2	100.0
Total	1741	100.0	100.0	

FRACTIONS (%)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Upto 33%	358	20.6	20.6	20.6
33+ to 60%	563	32.3	32.3	52.9
60+ to 80%	483	27.7	27.7	80.6
80+ to 100%	337	19.4	19.4	100.0
Total	1741	100.0	100.0	

MESUREMENTS (%)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Upto 33%	338	19.4	19.4	19.4
	33+ to 60%	511	29.4	29.4	48.8
	60+ to 80%	270	15.5	15.5	64.3
	80+ to 100%	622	35.7	35.7	100.0
	Total	1741	100.0	100.0	

Crosstabs - Contents Areas (Categorised) by Student's Gender

PLACE VALUE (%) * Student's Sex Crosstabulation

			Student's Sex		Total
			Boys	Girls	
PLACE VALUE (%)	Upto 33%	Count	283	139	422
		Row %	67.1%	32.9%	100.0%
		Col %	29.9%	17.5%	24.2%
	33+ to 60%	Count	274	231	505
		Row %	54.3%	45.7%	100.0%
		Col %	28.9%	29.1%	29.0%
	60+ to 80%	Count	272	223	495
		Row %	54.9%	45.1%	100.0%
		Col %	28.7%	28.1%	28.4%
	80+ to 100%	Count	119	200	319
		Row %	37.3%	62.7%	100.0%
		Col %	12.6%	25.2%	18.3%
Total		Count	948	793	1741
		Row %	54.5%	45.5%	100.0%
		Col %	100.0%	100.0%	100.0%

ADDITION (%) * Student's Sex Crosstabulation

			Student's Sex		Total
			Boys	Girls	
ADDITION (%)	Upto 33%	Count	177	121	298
		Row %	59.4%	40.6%	100.0%
		Col %	18.7%	15.3%	17.1%
	33+ to 60%	Count	260	216	476
		Row %	54.6%	45.4%	100.0%
		Col %	27.4%	27.2%	27.3%
	60+ to 80%	Count	282	240	522
		Row %	54.0%	46.0%	100.0%
		Col %	29.7%	30.3%	30.0%
	80+ to 100%	Count	229	216	445
		Row %	51.5%	48.5%	100.0%
		Col %	24.2%	27.2%	25.6%
Total		Count	948	793	1741
		Row %	54.5%	45.5%	100.0%
		Col %	100.0%	100.0%	100.0%

SUBTRACTION (%) * Student's Sex Crosstabulation

			Student's Sex		Total
			Boys	Girls	
SUBTRACTION (%)	Upto 33%	Count	229	192	421
		Row %	54.4%	45.6%	100.0%
		Col %	24.2%	24.2%	24.2%
	33+ to 60%	Count	259	234	493
		Row %	52.5%	47.5%	100.0%
		Col %	27.3%	29.5%	28.3%
	60+ to 80%	Count	250	217	467
		Row %	53.5%	46.5%	100.0%
		Col %	26.4%	27.4%	26.8%
	80+ to 100%	Count	210	150	360
		Row %	58.3%	41.7%	100.0%
		Col %	22.2%	18.9%	20.7%
Total		Count	948	793	1741
		Row %	54.5%	45.5%	100.0%
		Col %	100.0%	100.0%	100.0%

MULTIPLICATION (%) * Student's Sex Crosstabulation

			Student's Sex		Total
			Boys	Girls	
MULTIPLICATION (%)	Upto 33%	Count	181	138	319
		Row %	56.7%	43.3%	100.0%
		Col %	19.1%	17.4%	18.3%
	33+ to 60%	Count	211	185	396
		Row %	53.3%	46.7%	100.0%
		Col %	22.3%	23.3%	22.7%
	60+ to 80%	Count	274	210	484
		Row %	56.6%	43.4%	100.0%
		Col %	28.9%	26.5%	27.8%
	80+ to 100%	Count	282	260	542
		Row %	52.0%	48.0%	100.0%
		Col %	29.7%	32.8%	31.1%
Total	Count	948	793	1741	
	Row %	54.5%	45.5%	100.0%	
	Col %	100.0%	100.0%	100.0%	

DIVISION (%) * Student's Sex Crosstabulation

			Student's Sex		Total
			Boys	Girls	
DIVISION (%)	Upto 33%	Count	177	144	321
		Row %	55.1%	44.9%	100.0%
		Col %	18.7%	18.2%	18.4%
	33+ to 60%	Count	250	169	419
		Row %	59.7%	40.3%	100.0%
		Col %	26.4%	21.3%	24.1%
	60+ to 80%	Count	276	217	493
		Row %	56.0%	44.0%	100.0%
		Col %	29.1%	27.4%	28.3%
	80+ to 100%	Count	245	263	508
		Row %	48.2%	51.8%	100.0%
		Col %	25.8%	33.2%	29.2%
Total	Count	948	793	1741	
	Row %	54.5%	45.5%	100.0%	
	Col %	100.0%	100.0%	100.0%	

FRACTIONS (%) * Student's Sex Crosstabulation

			Student's Sex		Total
			Boys	Girls	
FRACTIONS (%)	Upto 33%	Count	210	148	358
		Row %	58.7%	41.3%	100.0%
		Col %	22.2%	18.7%	20.6%
	33+ to 60%	Count	341	222	563
		Row %	60.6%	39.4%	100.0%
		Col %	36.0%	28.0%	32.3%
	60+ to 80%	Count	246	237	483
		Row %	50.9%	49.1%	100.0%
		Col %	25.9%	29.9%	27.7%
	80+ to 100%	Count	151	186	337
		Row %	44.8%	55.2%	100.0%
		Col %	15.9%	23.5%	19.4%
Total	Count	948	793	1741	
	Row %	54.5%	45.5%	100.0%	
	Col %	100.0%	100.0%	100.0%	

MESUREMENTS (%) * Student's Sex Crosstabulation

			Student's Sex		Total
			Boys	Girls	
MESUREMENTS (%)	Upto 33%	Count	200	138	338
		Row %	59.2%	40.8%	100.0%
		Col %	21.1%	17.4%	19.4%
	33+ to 60%	Count	306	205	511
		Row %	59.9%	40.1%	100.0%
		Col %	32.3%	25.9%	29.4%
	60+ to 80%	Count	151	119	270
		Row %	55.9%	44.1%	100.0%
		Col %	15.9%	15.0%	15.5%
	80+ to 100%	Count	291	331	622
		Row %	46.8%	53.2%	100.0%
		Col %	30.7%	41.7%	35.7%
Total	Count	948	793	1741	
	Row %	54.5%	45.5%	100.0%	
	Col %	100.0%	100.0%	100.0%	

ANNEXURE - I

Figure 1

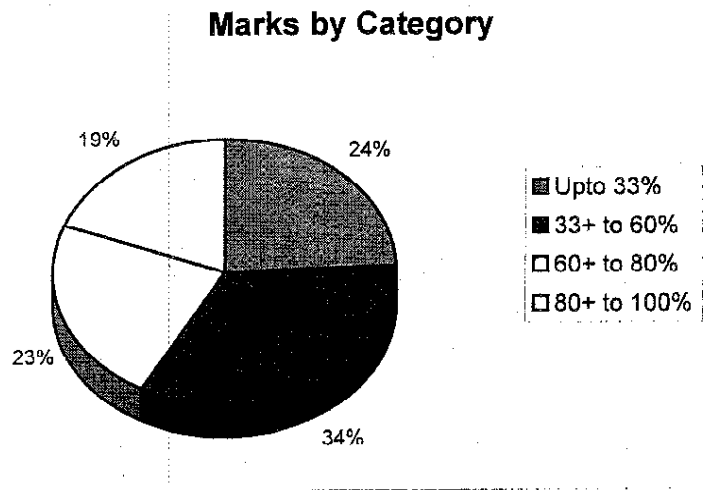


Figure 2

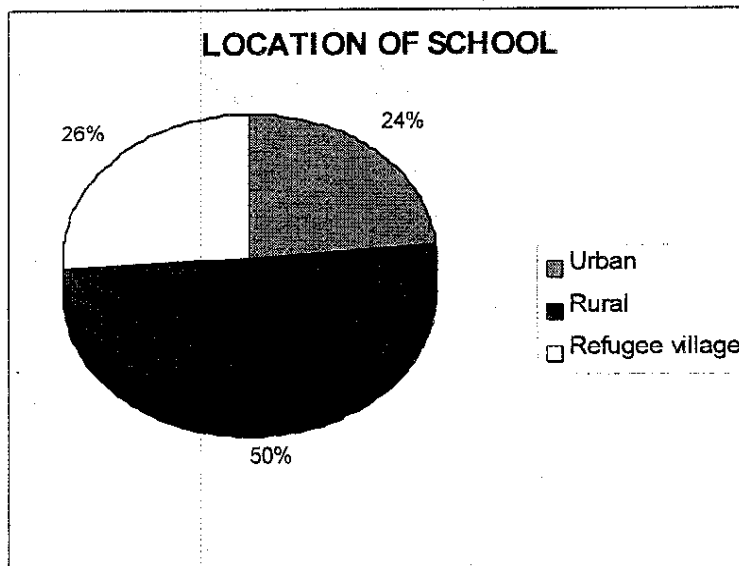


Figure 3

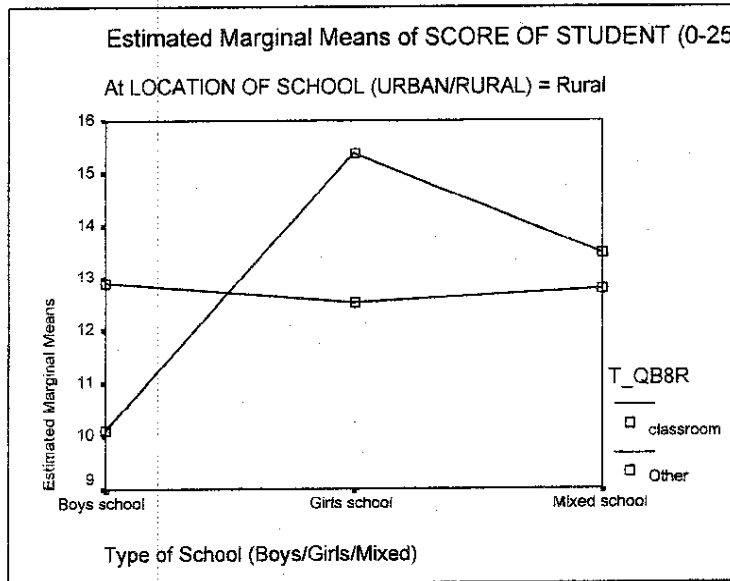


Figure 4

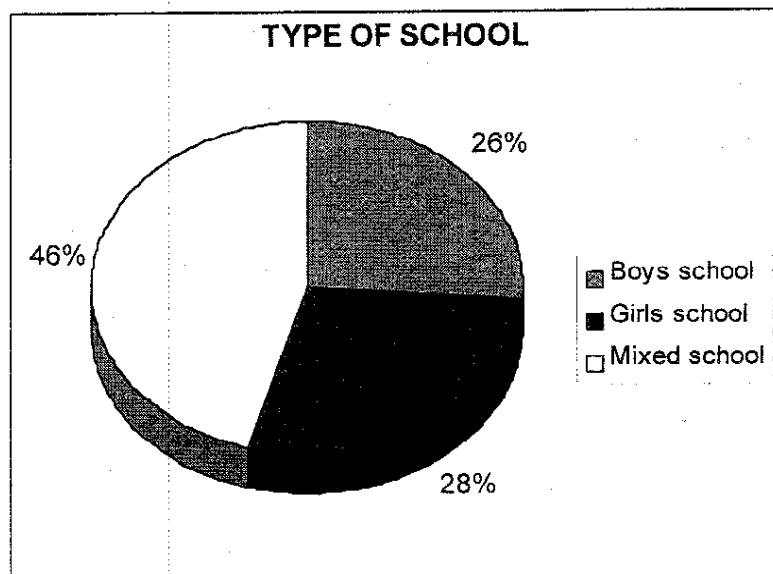


Figure 5

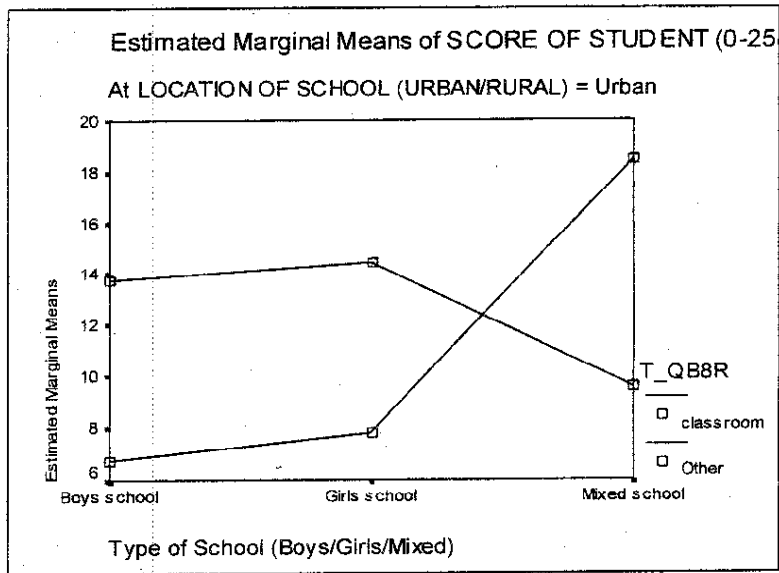


Figure 6

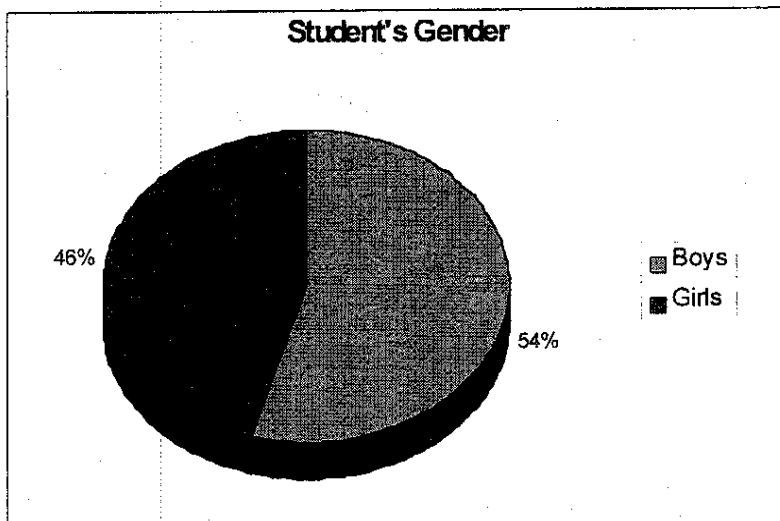


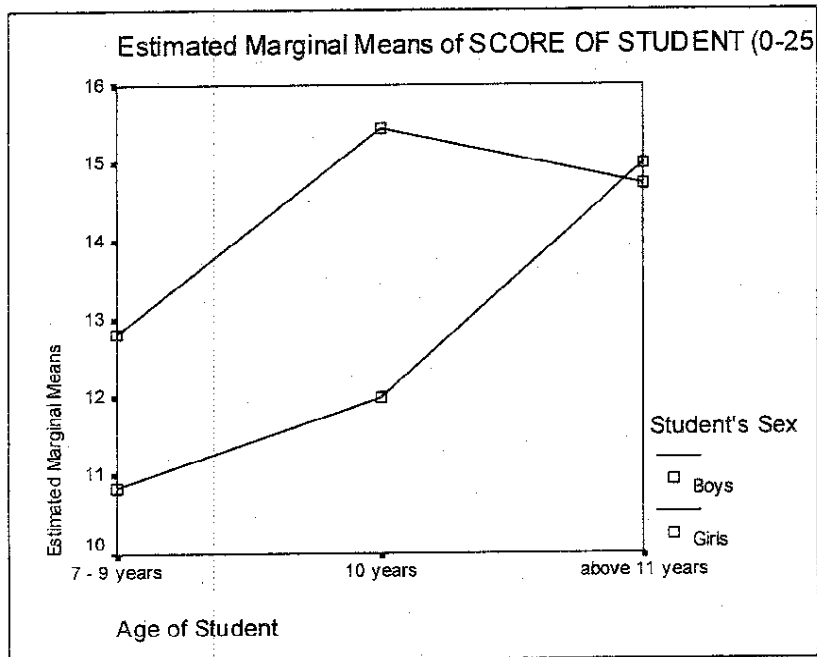
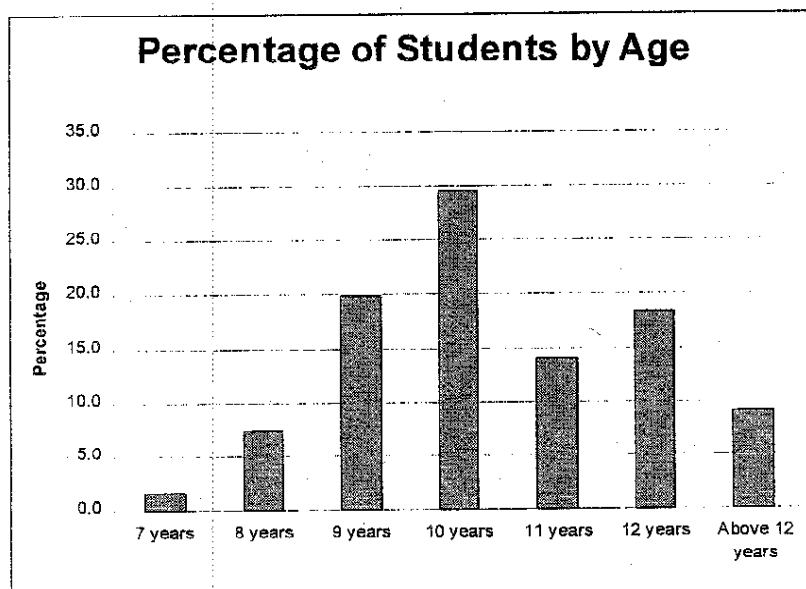
Figure 7**Figure 8**

Figure 9

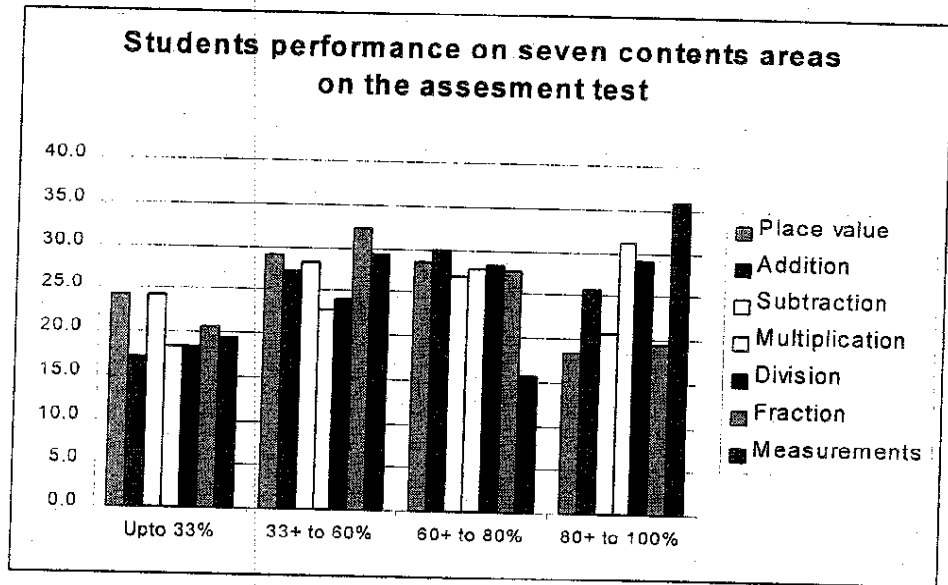


Figure 10

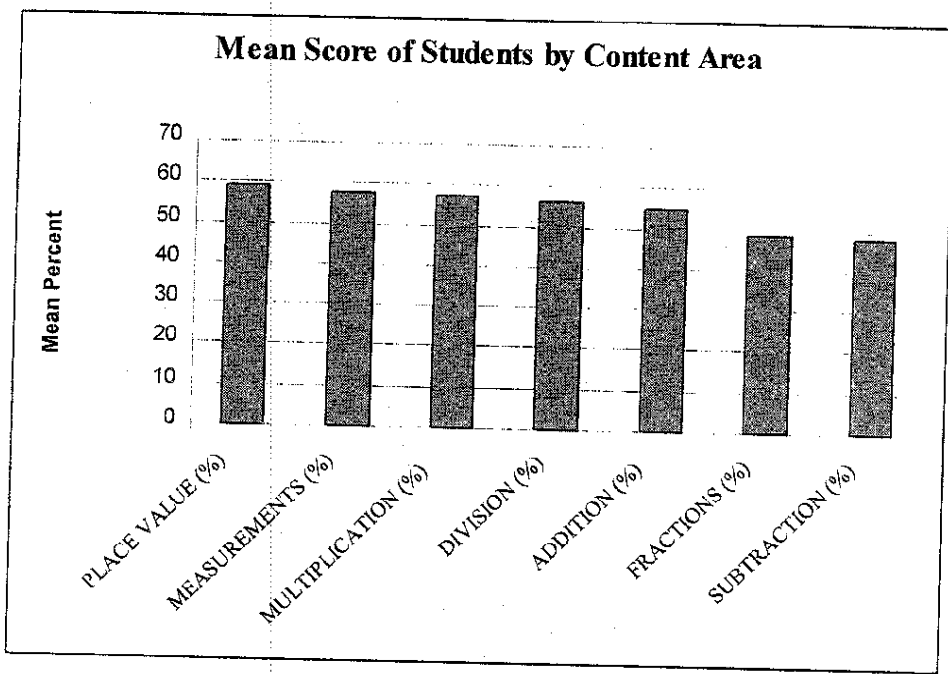


Figure 11

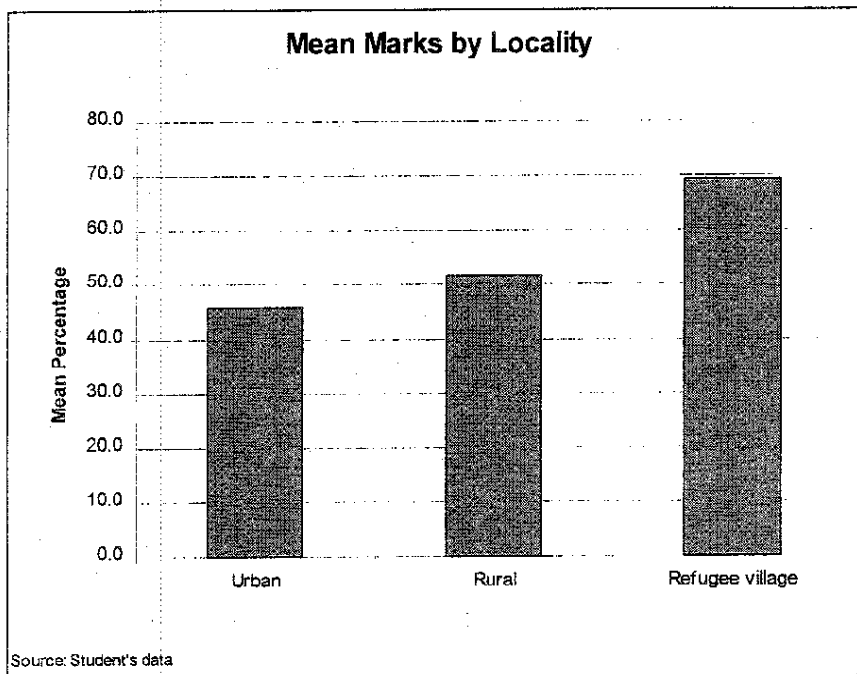


Figure 12

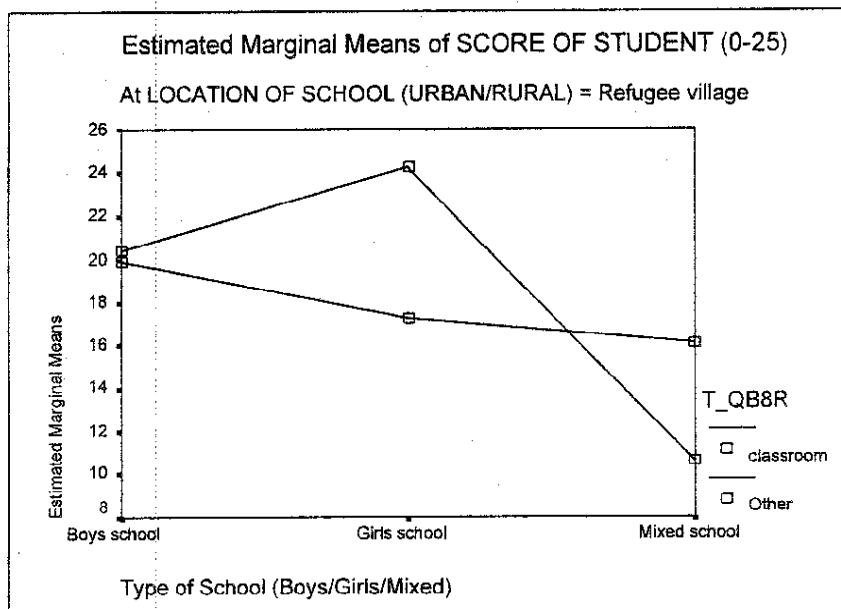


Figure 13

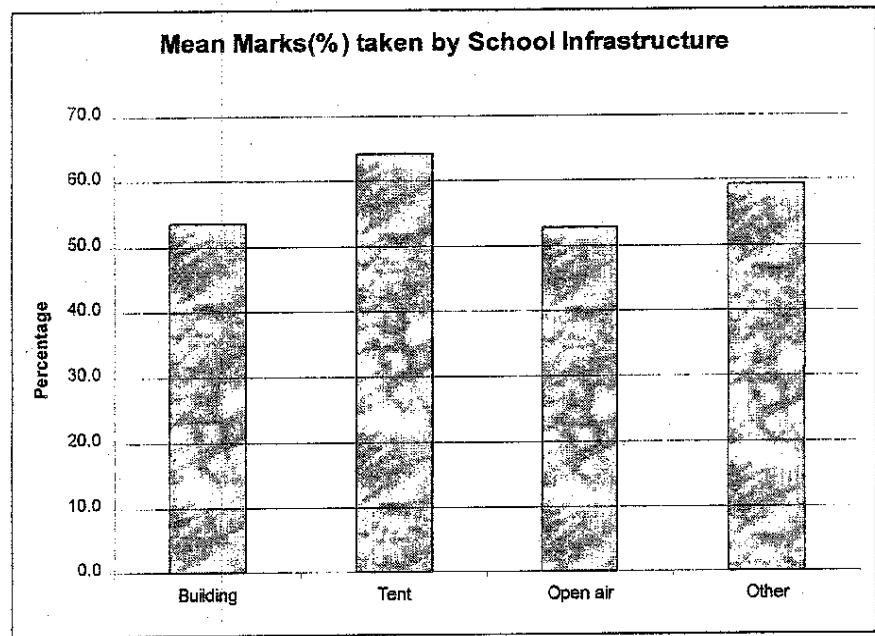


Figure 14

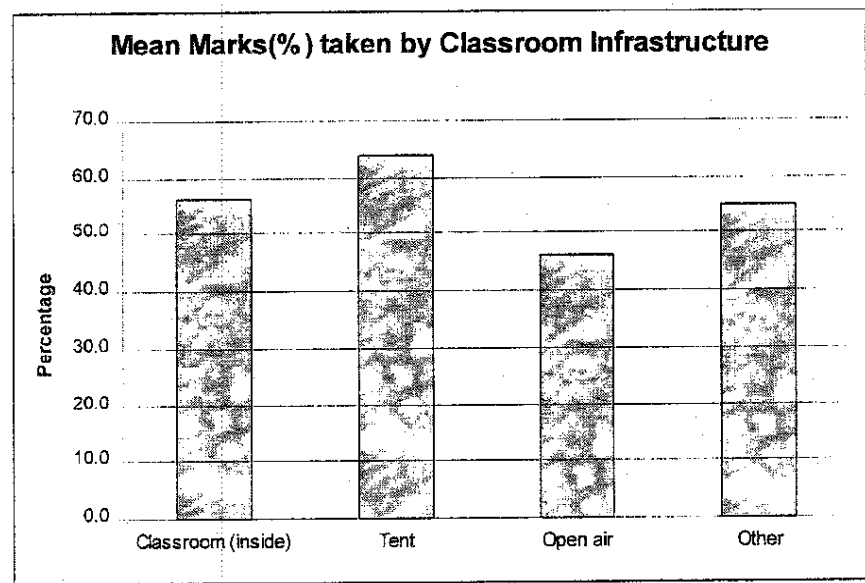


Figure 15

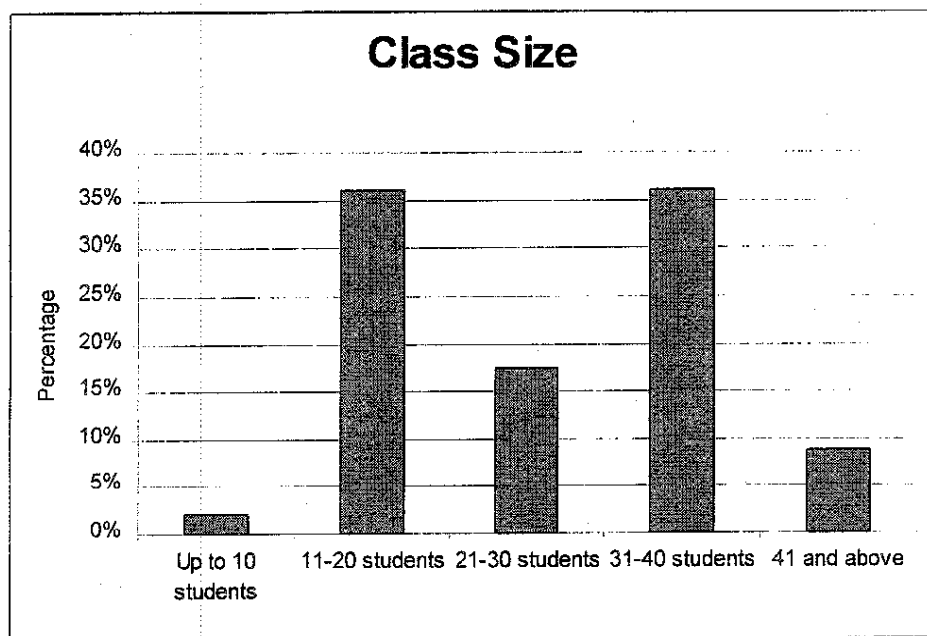


Figure 16

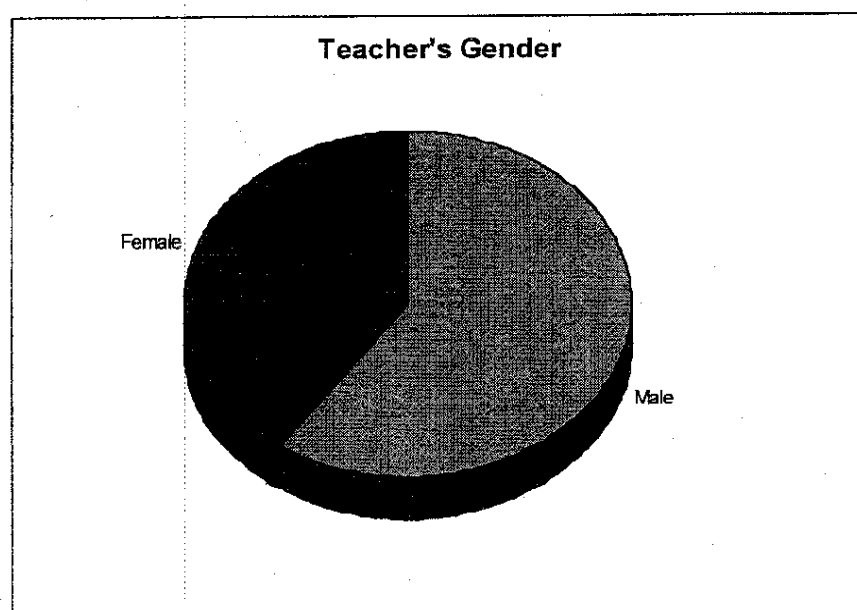
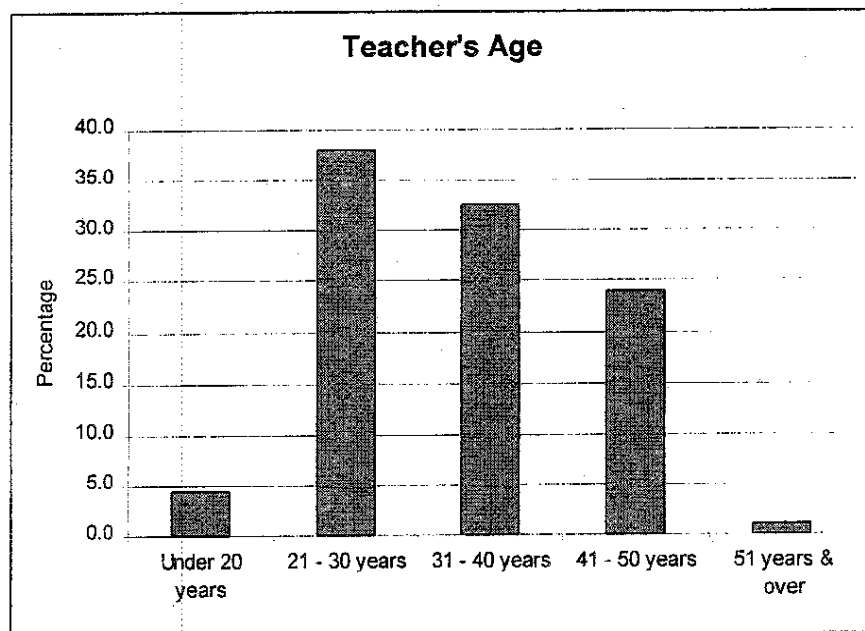


Figure 17

Frequencies - Student's Data

SUPPORTED AGENCIES

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid ACD	209	12.0	12.0	12.0
CARE	233	13.4	13.4	25.4
NAC	201	11.5	11.5	36.9
Ockenden International	225	12.9	12.9	49.9
SCA	645	37.0	37.0	86.9
SC-USA	228	13.1	13.1	100.0
Total	1741	100.0	100.0	

AREA WHERE SCHOOL IS LOCATED

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Badakshan	201	11.5	11.5	11.5
Ghazni	376	21.6	21.6	33.1
Kabul	209	12.0	12.0	45.1
Kunar	229	13.2	13.2	58.3
Paktia	76	4.4	4.4	62.7
Wardak	197	11.3	11.3	74.0
Balochistan	228	13.1	13.1	87.1
NWFP	225	12.9	12.9	100.0
Total	1741	100.0	100.0	

LOCATION OF SCHOOL (URBAN/RURAL)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Urban	410	23.5	23.5	23.5
Rural	878	50.4	50.4	74.0
Refugee village	453	26.0	26.0	100.0
Total	1741	100.0	100.0	

NAME OF YOUR SCHOOL'

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Fathema Tu Zahera	18	1.0	1.0	1.0
Shazad Khil	17	1.0	1.0	2.0
Zawoo	20	1.1	1.1	3.2
Imam Abu Hanifa - Mamozai	19	1.1	1.1	4.3
Waliaser	20	1.1	1.1	5.4
Imam-i-Zaman	20	1.1	1.1	6.5
Speena Kala-Hanifa	20	1.1	1.1	7.7
Khadija Tul Kubra	20	1.1	1.1	8.8
Syed us Shahada # 1	19	1.1	1.1	9.9
Syed us Shahada # 2	20	1.1	1.1	11.1
Noh Borja	20	1.1	1.1	12.2
Ali Abad	20	1.1	1.1	13.4
Syed Saif Shaheed H. S.	42	2.4	2.4	15.8

NAME OF YOUR SCHOOL'

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Kokcha High School	34	2.0	2.0	17.7
Najeeb Shaheed (Chata H. S.)	36	2.1	2.1	19.8
Batash P. S.	12	.7	.7	20.5
Mokhfa High School	39	2.2	2.2	22.7
Girls School No. 2	38	2.2	2.2	24.9
Karta Sch	20	1.1	1.1	26.1
Charqalai Chahardihi	20	1.1	1.1	27.2
Qalai-Ali-Mardan - Ist Part	16	.9	.9	28.1
Chihisutoun	13	.7	.7	28.9
Qalai-Ali-Mardan - IInd Part	19	1.1	1.1	30.0
Hesa Awai Mussayee (Part-I)	17	1.0	1.0	31.0
Nuburja Chihisutoun	10	.6	.6	31.5
Deh Dana	20	1.1	1.1	32.7
Hesa Awai Mussayee (Part-II)	20	1.1	1.1	33.8
Qalai Malik Bahadur Khan	17	1.0	1.0	34.8
Sanatorium Kila Jaffar	17	1.0	1.0	35.8
Karta Ghauwsuddin	20	1.1	1.1	36.9
Bibi Ayesha Saddiqa	19	1.1	1.1	38.0
Katcha Pakka	20	1.1	1.1	39.2
Dursa Mand # 1	20	1.1	1.1	40.3
Kotki (Hazarat Mohd. Bin Hasan Shabani)	20	1.1	1.1	41.5
Tall # 1 Main School (Hazrat Bilal)	20	1.1	1.1	42.6
Kahi # 1 Camp	20	1.1	1.1	43.8
Jazo Maidan	20	1.1	1.1	44.9
Kahi - Logar/ Kotki Girls School	17	1.0	1.0	45.9
Barro Pool/ Katki Girls School	18	1.0	1.0	46.9
Tall # 2 Girls School	19	1.1	1.1	48.0
Hunza Bazar - Sangit Road	18	1.0	1.0	49.1
Hunza Bazar - Stationt Road	14	.8	.8	49.9
Hilalzi	14	.8	.8	50.7
Shelton	20	1.1	1.1	51.8
Maunai	20	1.1	1.1	53.0
Shangar Shah	20	1.1	1.1	54.1
Shinkorak	20	1.1	1.1	55.3
Tisha	20	1.1	1.1	56.4
Khadija Tul Kubra	15	.9	.9	57.3
Dausha Khiei	20	1.1	1.1	58.4
Damkaly	20	1.1	1.1	59.6
Koutky (Hazrat Ayesha)	20	1.1	1.1	60.7
Chowkie	20	1.1	1.1	61.9
Mazawara	20	1.1	1.1	63.0
Osmania Jay Zarin	20	1.1	1.1	64.2
Topes	16	.9	.9	65.1
Abdullah Azam	6	.3	.3	65.4
Tajbaki	12	.7	.7	66.1
Fatima Zahra	9	.5	.5	66.6
Sofi Saheb	20	1.1	1.1	67.8
Madina-tul-Aloom	37	2.1	2.1	69.9
Shaheed Ezatullah	20	1.1	1.1	71.1
Maydan Pri	20	1.1	1.1	72.2
Imam Abu Hanifa	20	1.1	1.1	73.3

NAME OF YOUR SCHOOL

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Saber Yar	17	1.0	1.0	74.3
Sultan Mahmood Ghaznavi	17	1.0	1.0	75.3
Amam Abu Hanifa	13	.7	.7	76.0
Khawaja Roshani	20	1.1	1.1	77.2
Home School Kalati	13	.7	.7	77.9
Tassan	20	1.1	1.1	79.1
Zahoor-ul-Haq	20	1.1	1.1	80.2
Hazarat Zohra - Sultan Ebrahim	20	1.1	1.1	81.4
Home School Noabad	20	1.1	1.1	82.5
Imam Qasim	20	1.1	1.1	83.7
Abu Nasar Shakan	16	.9	.9	84.6
Roshan Jalaluddin	20	1.1	1.1	85.8
Doctor Zubair Shaheed	20	1.1	1.1	86.9
School No. 5	20	1.1	1.1	88.1
School No. 10	34	2.0	2.0	90.0
School No. 15	20	1.1	1.1	91.2
School No. 20	20	1.1	1.1	92.3
School No. 25	18	1.0	1.0	93.3
School No. 30	17	1.0	1.0	94.3
School No. 35	39	2.2	2.2	96.6
School No. 4	20	1.1	1.1	97.7
School No. 14	20	1.1	1.1	98.9
School No. 22	20	1.1	1.1	100.0
Total	1741	100.0	100.0	

AGE OF STUDENT (IN COMPLETED YEARS)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 7.00	28	1.6	1.6	1.6
8.00	128	7.4	7.4	9.0
9.00	341	19.6	19.6	28.5
10.00	508	29.2	29.2	57.7
11.00	240	13.8	13.8	71.5
12.00	315	18.1	18.1	89.6
13.00	88	5.1	5.1	94.7
14.00	45	2.6	2.6	97.2
15.00	12	.7	.7	97.9
16.00	4	.2	.2	98.2
17.00	2	.1	.1	98.3
18.00	3	.2	.2	98.4
20.00	1	.1	.1	98.5
No information	26	1.5	1.5	100.0
Total	1741	100.0	100.0	

LANGUAGE SPOKEN AT HOME

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Pashto	963	55.3	55.3	55.3
Dari	741	42.6	42.6	97.9
Uzbaki	11	.6	.6	98.5
Persian (farsi)	26	1.5	1.5	100.0
Total	1741	100.0	100.0	

Student's Sex

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Boys	948	54.5	54.5	54.5
Girls	793	45.5	45.5	100.0
Total	1741	100.0	100.0	

WHICH NUMBER IS TWO HUNDRED AND FORTY?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a. 204	87	5.0	5.0	5.0
b. 420	65	3.7	3.7	8.7
c. 240	1475	84.7	84.7	93.5
d. 402	29	1.7	1.7	95.1
Skipped/ No Info	74	4.3	4.3	99.4
Circled more than 1	11	.6	.6	100.0
Total	1741	100.0	100.0	

WHAT IS THE VALUE OF THE CIRCLED NUMBER IN 1 2 2 6?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a. 2	377	21.7	21.7	21.7
b. 20	823	47.3	47.3	68.9
c. 200	130	7.5	7.5	76.4
d. 2000	111	6.4	6.4	82.8
Skipped/ No Info	291	16.7	16.7	99.5
Circled more than 1	9	.5	.5	100.0
Total	1741	100.0	100.0	

WE MEASURE CLOTH BY:

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a. meter	1337	76.8	76.8	76.8
b. minutes	95	5.5	5.5	82.3
c. sir	90	5.2	5.2	87.4
d. liter	29	1.7	1.7	89.1
Skipped/ No Info	185	10.6	10.6	99.7
9	5	.3	.3	100.0
Total	1741	100.0	100.0	

WHAT IS THE SUM OF 293 + 125?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a. 318	191	11.0	11.0	11.0
b. 418	1056	60.7	60.7	71.6
c. 3118	182	10.5	10.5	82.1
d. 4118	97	5.6	5.6	87.7
Skipped/ No Info	203	11.7	11.7	99.3
Circled more than 1	12	.7	.7	100.0
Total	1741	100.0	100.0	

WHICH ONE HAS A WRONG ANSWER?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a. $67 - 33 = 34$	220	12.6	12.6	12.6
b. $46 - 28 = 41$	1035	59.4	59.4	72.1
c. $81 - 40 = 41$	155	8.9	8.9	81.0
d. $75 - 63 = 12$	98	5.6	5.6	86.6
Skipped/ No Info	209	12.0	12.0	98.6
Circled more than 1	24	1.4	1.4	100.0
Total	1741	100.0	100.0	

WHAT IS THE TIME ON THE CLOCK?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a. 8:30	1163	66.8	66.8	66.8
b. 12:30	110	6.3	6.3	73.1
c. 6:30	129	7.4	7.4	80.5
d. 9:30	108	6.2	6.2	86.7
Skipped/ No Info	220	12.6	12.6	99.4
Circled more than 1	11	.6	.6	100.0
Total	1741	100.0	100.0	

SOLVE THE FOLLOWING PROBLEM: $210 \times 5 = ?$

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a. 105	167	9.6	9.6	9.6
b. 150	177	10.2	10.2	19.8
c. 1105	164	9.4	9.4	29.2
d. 1050	982	56.4	56.4	85.6
Skipped/ No Info	241	13.8	13.8	99.4
Circled more than 1	10	.6	.6	100.0
Total	1741	100.0	100.0	

HAMAD HAD 225 AFS. HIS UNCLE GAVE HIM 200 AFS. & HIS FRIEND

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a. 5910 Afs.	178	10.2	10.2	10.2
b. 5100 Afs.	120	6.9	6.9	17.1
c. 600 Afs.	1022	58.7	58.7	75.8
d. 590 Afs.	144	8.3	8.3	84.1
Skipped/ No Info	272	15.6	15.6	99.7
Circled more than 1	5	.3	.3	100.0
Total	1741	100.0	100.0	

IN THE FOLLOWING PROBLEMS, WHICH ONE HAS A WRONG ANSWER?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a. $14 / 2 = 7$	151	8.7	8.7	8.7
b. $14 / 7 = 2$	161	9.2	9.2	17.9
c. $14 / 14 = 0$	958	55.0	55.0	72.9
d. $14 / 1 = 14$	139	8.0	8.0	80.9
Skipped/ No Info	316	18.2	18.2	99.1
Circled more than 1	16	.9	.9	100.0
Total	1741	100.0	100.0	

WHICH ABACUS SHOWS THE NUMBER 35?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a. (oo) (oooo)	141	8.1	8.1	8.1
b. (ooo) (ooooo)	1139	65.4	65.4	73.5
c. (oooo) (ooo)	117	6.7	6.7	80.2
d. (oo) (ooooo)	66	3.8	3.8	84.0
Skipped/ No Info	259	14.9	14.9	98.9
Circled more than 1	19	1.1	1.1	100.0
Total	1741	100.0	100.0	

RAHILA CUTS A WATERMELON INTO 5 EQUAL SIZED PIECES. HOW MUCH

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a. 4/5	672	38.6	38.6	38.6
b. 3/4	107	6.1	6.1	44.7
c. 1/4	286	16.4	16.4	61.2
d. 1/5	376	21.6	21.6	82.8
Skipped/ No Info	286	16.4	16.4	99.2
Circled more than 1	14	.8	.8	100.0
Total	1741	100.0	100.0	

WHAT IS THE ANSWER TO THIS PROBLEM: $132 \times 6 = ?$

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a. 6182	186	10.7	10.7	10.7
b. 792	1000	57.4	57.4	68.1
c. 682	132	7.6	7.6	75.7
d. 692	158	9.1	9.1	84.8
Skipped/ No Info	256	14.7	14.7	99.5
Circled more than 1	9	.5	.5	100.0
Total	1741	100.0	100.0	

A PERSON HAD 8950 AFS. HE PAID 2569 AFS. TO BUY PENS FOR HIS

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a. 6491 Afs.	147	8.4	8.4	8.4
b. 6419 Afs.	277	15.9	15.9	24.4
c. 6391 Afs.	242	13.9	13.9	38.3
d. 6381 Afs.	734	42.2	42.2	80.4
Skipped/ No Info	334	19.2	19.2	99.6
Circled more than 1	7	.4	.4	100.0
Total	1741	100.0	100.0	

HAMAD HAD SIX CHILDREN. HE BOUGHT FOR EACH OF THEM FIVE SWEE

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a. 11	187	10.7	10.7	10.7
b. 30	1008	57.9	57.9	68.6
c. 35	152	8.7	8.7	77.4
d. 25	100	5.7	5.7	83.1
Skipped/ No Info	289	16.6	16.6	99.7
Circled more than 1	5	.3	.3	100.0
Total	1741	100.0	100.0	

WHAT IS THE ANSWER TO THIS PROBLEM: $35 / ? = 5$

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a. 7	1121	64.4	64.4	64.4
b. 8	100	5.7	5.7	70.1
c. 3	104	6.0	6.0	76.1
d. 5	143	8.2	8.2	84.3
Skipped/ No Info	268	15.4	15.4	99.7
Circled more than 1	5	.3	.3	100.0
Total	1741	100.0	100.0	

WHICH SHAPE HAS 4 SIDES OF EQUAL LENGTH?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a. triangle	132	7.6	7.6	7.6
b. rectangle	211	12.1	12.1	19.7
c. square	916	52.6	52.6	72.3
d. circle	101	5.8	5.8	78.1
Skipped/ No Info	377	21.7	21.7	99.8
Circled more than 1	4	.2	.2	100.0
Total	1741	100.0	100.0	

IF WE DIVIDE 72 APPLES BETWEEN 9 STUDENTS EQUALLY, HOW MANY

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a. 7	175	10.1	10.1	10.1
b. 9	225	12.9	12.9	23.0
c. 6	151	8.7	8.7	31.6
d. 8	850	48.8	48.8	80.5
Skipped/ No Info	336	19.3	19.3	99.8
Circled more than 1	4	.2	.2	100.0
Total	1741	100.0	100.0	

WHICH SHADED PART SHOWS HALF A CIRCLE?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a.	129	7.4	7.4	7.4
b.	1116	64.1	64.1	71.5
c.	145	8.3	8.3	79.8
d.	69	4.0	4.0	83.8
Skipped/ No Info	272	15.6	15.6	99.4
Circled more than 1	10	.6	.6	100.0
Total	1741	100.0	100.0	

IN THE FOLLOWING PROBLEMS, WHICH ONE HAS A WRONG ANSWER?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a. $63 + 24 = 87$	230	13.2	13.2	13.2
b. $94 + 104 = 198$	196	11.3	11.3	24.5
c. $27 + 61 = 88$	173	9.9	9.9	34.4
d. $166 + 31 = 476$	777	44.6	44.6	79.0
Skipped/ No Info	345	19.8	19.8	98.9
Circled more than 1	20	1.1	1.1	100.0
Total	1741	100.0	100.0	

NAJIBA STARTS TO COOK DINNER AT 6:30. SHE FINISHES COOKING A

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a. 15 minutes	197	11.3	11.3	11.3
b. 30 minutes	180	10.3	10.3	21.7
c. 1 hour	133	7.6	7.6	29.3
d. 45 minutes	873	50.1	50.1	79.4
Skipped/ No Info	347	19.9	19.9	99.4
Circled more than 1	11	.6	.6	100.0
Total	1741	100.0	100.0	

IF WE ADD $1/2 + 1/4$ THE RESULT IS:

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a. $1/2$	294	16.9	16.9	16.9
b. $3/4$	752	43.2	43.2	60.1
c. $1/4$	216	12.4	12.4	72.5
d. 1	110	6.3	6.3	78.8
6	1	.1	.1	78.9
Skipped/ No Info	353	20.3	20.3	99.1
Circled more than 1	15	.9	.9	100.0
Total	1741	100.0	100.0	

WHAT IS THE RESULT IF WE SUBTRACT 176 FROM 835?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a. 659	738	42.4	42.4	42.4
b. 741	302	17.3	17.3	59.7
c. 759	200	11.5	11.5	71.2
d. 769	158	9.1	9.1	80.3
Skipped/ No Info	339	19.5	19.5	99.8
8	1	.1	.1	99.8
Circled more than 1	3	.2	.2	100.0
Total	1741	100.0	100.0	

WHICH TABLE SHOWS NUMBER 250 CORRECTLY?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a. hundreds(2) tens(0) units(5)	71	4.1	4.1	4.1
b. hundreds(5) tens(2) units(0)	64	3.7	3.7	7.8
c. hundreds(2) tens(5) units(0)	669	38.4	38.4	46.2
d. hundreds() tens(2) units(5)	48	2.8	2.8	48.9
Skipped/ No Info	97	5.6	5.6	54.5
Crossed	783	45.0	45.0	99.5
Circled more than 1	9	.5	.5	100.0
Total	1741	100.0	100.0	

ABOUT HOW LONG IS THE PICTURE OF THIS PENCIL?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a. 10 cm	296	17.0	17.0	17.0
b. 20 cm	120	6.9	6.9	23.9
c. 30 cm	130	7.5	7.5	31.4
d. 5 cm	802	46.1	46.1	77.4
Skipped/ No Info	390	22.4	22.4	99.8
9	3	.2	.2	100.0
Total	1741	100.0	100.0	

LOOK AT THE PATTERN.... WHICH IS THE NEXT SHAPE?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid a. triangle	916	52.6	52.6	52.6
b. circle	168	9.6	9.6	62.3
c. square	166	9.5	9.5	71.8
d. rectangle	94	5.4	5.4	77.2
Skipped/ No Info	396	22.7	22.7	99.9
Circled more than 1	1	.1	.1	100.0
Total	1741	100.0	100.0	

Frequencies - School/ Teacher's Data

Frequency Table

Supported Agencies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ACD-Agriculture & Construction Development	12	12.5	12.5	12.5
	CARE International	12	12.5	12.5	25.0
	NAC-Norwegian Afghanistan Committee/ UNICEF	12	12.5	12.5	37.5
	OI-Ockenden International	12	12.5	12.5	50.0
	SCA-Swedish Committee for Afghanistan	36	37.5	37.5	87.5
	SC USA-Save the Children USA	12	12.5	12.5	100.0
	Total	96	100.0	100.0	

Type of School (Boys/Girls/Mixed)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Boys school	24	25.0	26.1	26.1
	Girls school	26	27.1	28.3	54.3
	Mixed school	42	43.8	45.7	100.0
	Total	92	95.8	100.0	
Missing	System	4	4.2		
Total		96	100.0		

School Calendar

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Cold season	57	59.4	62.0	62.0
	Hot season	18	18.8	19.6	81.5
	School open all year	15	15.6	16.3	97.8
	Other	2	2.1	2.2	100.0
	Total	92	95.8	100.0	
Missing	System	4	4.2		
Total		96	100.0		

Province where school located

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Badakhshan	13	13.5	14.1	14.1
	Ghazi	18	18.8	19.6	33.7
	Kabul	12	12.5	13.0	46.7
	Kunar	12	12.5	13.0	59.8
	Paktia (Khost)	2	2.1	2.2	62.0
	Takhar	11	11.5	12.0	73.9
	Balochistan (Pakistan)	12	12.5	13.0	87.0
	NWFP (Pakistan)	12	12.5	13.0	100.0
	Total	92	95.8	100.0	
Missing	System	4	4.2		
Total		96	100.0		

Location of school (urban/rural)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Urban	22	22.9	23.9	23.9
	Semi-urban	8	8.3	8.7	32.6
	Rural	39	40.6	42.4	75.0
	Refugee village	23	24.0	25.0	100.0
	Total	92	95.8	100.0	
Missing	System	4	4.2		
Total		96	100.0		

Language/medium of instruction in the school

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Pashto	50	52.1	54.3	54.3
	Dari	42	43.8	45.7	100.0
	Total	92	95.8	100.0	
Missing	System	4	4.2		
Total		96	100.0		

School Facilities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Building	65	67.7	70.7	70.7
	Tent	2	2.1	2.2	72.8
	Open air	11	11.5	12.0	84.8
	Other	13	13.5	14.1	98.9
	No info.	1	1.0	1.1	100.0
	Total	92	95.8	100.0	
Missing	System	4	4.2		
Total		96	100.0		

Class (tested) facilities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Classroom (inside)	66	68.8	71.7	71.7
	Tent	3	3.1	3.3	75.0
	Open air	16	16.7	17.4	92.4
	Other	7	7.3	7.6	100.0
	Total	92	95.8	100.0	
Missing	System	4	4.2		
Total		96	100.0		

Class size

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 - 10 students	2	2.1	2.2	2.2
	11 - 20 students	33	34.4	35.9	38.0
	21 - 30 students	16	16.7	17.4	55.4
	31 - 40 students	33	34.4	35.9	91.3
	41 or more students (please specify #)	8	8.3	8.7	100.0
	Total	92	95.8	100.0	
Missing	System	4	4.2		
Total		96	100.0		

Type of textbook used by the teacher for Maths

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	UNO revised	39	40.6	42.4	42.4
	SCA books	29	30.2	31.5	73.9
	GTZ/ BEFARc	12	12.5	13.0	87.0
	Other (please specify)	12	12.5	13.0	100.0
	Total	92	95.8	100.0	
Missing	System	4	4.2		
Total		96	100.0		

Availability of mathematics textbooks for students

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	All students have the book	74	77.1	80.4	80.4
	More than half	3	3.1	3.3	83.7
	less than half	8	8.3	8.7	92.4
	None of the students	7	7.3	7.6	100.0
	Total	92	95.8	100.0	
Missing	System	4	4.2		
Total		96	100.0		

Indicate teacher's sex

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	55	57.3	59.8	59.8
	Female	37	38.5	40.2	100.0
	Total	92	95.8	100.0	
Missing	System	4	4.2		
Total		96	100.0		

What is your (teacher) age?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under 20 years	4	4.2	4.3	4.3
	21 - 30 years	35	36.5	38.0	42.4
	31 - 40 years	30	31.3	32.6	75.0
	41 - 50 years	22	22.9	23.9	98.9
	51 years & over	1	1.0	1.1	100.0
	Total	92	95.8	100.0	
Missing	System	4	4.2		
Total		96	100.0		

What is your highest academic qualification?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Completed primary	2	2.1	2.2	2.2
	Completed middle school (G 9)	8	8.3	8.7	10.9
	Completed lice (G 12)	56	58.3	60.9	71.7
	BA/ BSc	14	14.6	15.2	87.0
	Other	8	8.3	8.7	95.7
	No Info.	4	4.2	4.3	100.0
	Total	92	95.8	100.0	
Missing	System	4	4.2		
Total		96	100.0		

Provide information about type of professional training you

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No professional training	27	28.1	29.3	29.3
	Emergency TTS (10th G)	1	1.0	1.1	30.4
	Teacher training high School (12th G)	11	11.5	12.0	42.4
	Teacher training Institute (14th G)	12	12.5	13.0	55.4
	Institute of Pedagogy (16th G)	6	6.3	6.5	62.0
	Other (please specify)	26	27.1	28.3	90.2
	No info.	9	9.4	9.8	100.0
	Total	92	95.8	100.0	
Missing	System	4	4.2		
Total		96	100.0		

Provide the # of years of experience you have in teaching pr

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 1 year	11	11.5	12.0	12.0
	1 - 5 years	41	42.7	44.6	56.5
	6 - 10 years	18	18.8	19.6	76.1
	11 - 20 years	15	15.6	16.3	92.4
	21 or more years	6	6.3	6.5	98.9
	No info.	1	1.0	1.1	100.0
	Total	92	95.8	100.0	
Missing	System	4	4.2		
Total		96	100.0		