DOCUMENT RESUME

ED 229 213 RC 014 080

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TITLE - Item Bank User's Manual. A Title I Migrant Education Section 143 Project. Bulletin No. 2399.
INSTITUTION Wisconsin State Dept. of Public Instruction, Madison. Div. for Management and Planning Services.
SPONS AGENCY Office of Elementary and Secondary Education (ED), Washington, DC. Migrant Education Programs.
PUB DATE May 82
NOTE 54p.
PUB TYPE Guides - Non-Classroom Use (055)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *Computer Assisted Testing; Definitions; Elementary School Mathematics; Elementary Secondary Education; *Item Banks; *Migrant Education; *Quantitative Tests; Reading Skills; *Reading Tests; Secondary School Mathematics; Test Items
IDENTIFIERS Computer Assisted Test Construction; *Wisconsin

ABSTRACT

Providing instructors an efficient way to acquire a well-defined, tailored test for a given student, or group of students, the Item Bank deals in multiple-choice, Rasch-calibrated problems which are deposited under two subject areas: reading and mathematics. Users can obtain a test which is appropriate to what their migrant students have been taught, select the difficulty level of the test problems, and be assured of their quality. Divided into seven parts, this manual begins with a brief discussion of the 143 Project and the Item Bank. Part II explains the procedure by which a teacher requests a test from the Item Bank terminal, assuming that the teacher does not have direct access to either a computer terminal or the software developed under the project. Part III provides information directly relevant to the execution of the Item Bank programs. Part IV describes the actual Item Bank programs, detailing the nature and execution of each program, with the specific purpose of assembling a test. Part V lists the present limitations of the system. The manual concludes with a detailed listing of the skills, subskills, and definitions of subskills in the Item Bank and sample test packets for elementary and secondary mathematics. (NQA)

ITEM BANK USER'S MANUAL

A Title I Migrant Education Section 143 Project

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PREFACE

This Manual, as well as the entire development of the Migrant Education Item Bank, were made possible through a grant from the United States Department of Education--as provided for in Section 143 of Public Law 95-561. Per agreement, the results of this project have been recorded in usable form and are also being made available to users outside the State of Wisconsin.

The Department of Public Instruction wishes to acknowledge the contributions made by the following:

Frank N. Brown, who continued to supervise the project;

William C. Knight, who was responsible for the computer programming;

Philip J. Roth, who entered the data, and composed the User's Manual and other reports; and

Dave Krueger, for his contribution to writing the Section 143 application.

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I. INTRODUCTION

In the Rules and Regulations governing grants to State Educational Agencies to meet the Special Education Needs of Migratory Children, in accordance with P.L. 95-591, Section 116 d.12 requires that the State's annual program plan include:

1. "The three most important objectives against which program success will be measured; and:

2. "A description of how the measurement will be conducted and how the results will be reported."

Based on observations of the evaluations reported, fulfilling the above requirements--using generally accepted evaluation techniques--appeared to be an insurmountable task. Moreover, further observations revealed that in recent years, while teachers were administering tests and conducting other evaluations to approximately 3300 migrant students enrolled throughout the year, only about 20% of these evaluations were being ultimately reported.

An examination of the causes for the very limited reporting of test data revealed that:

1. The SEA concluded that the results of standardized tests were not valid when used with children enrolled for a short period of time (Statistically, the Migrant students represent a deviant population being tested against a standardized

norm); thus encouraging the use of other testing techniques.

2. Teacher-made tests have also been of limited value, however, due to their subjective nature. Not only are such tests statistically questionable, teachers are hesitent to include them on a pupil's permanent record.

Without proper data, consequently, it is impossible to make meaningful comparisons or to observe the impact of Title I-funded instruction in a longitudinal manner. Comparable objective data are necessary if decision makers are going to be in the position to develop formative evaluation and program-planning.

The 143 Project

With this in mind, the 143 project was undertaken with the expectation that its development would lead to the resolution of a persistent problem: how to accurately assess the impact of Migrant Education programs on participating children, particularly during the summer months, and other short periods of time.

We feel that some of the problems associated with assessing educational impact can be addressed through the use of item banks, which are created in order to assess student achievement through tests well-suited to students and their respective curricula.

Furthermore, a composite of test data--derived from the use of item banks--can provide decision-makers with pertinent

information about Title I Migrant student achievement in the basic learning areas such as reading, language arts, and mathematics.

Finally, through the item bank, expectations for a given individual, or a group of students, can be more easily expressed in objective terms when determining the impact of Title I intervention.

The overall purpose of the item bank, however, is to provide an instructor an efficient way to acquire a well-defined, tailored, test for a given student, or group of students.

The Item Bank

An item bank is similar to any other bank except that it deals in multiple-choice problems, rather than money. In the present item bank, Rasch-calibrated problems, or items, are deposited under two subject areas: Reading and Mathematics. An item bank user comes to this bank and withdraws any number of items which the user needs in order to test various aspects of math, or reading, or both.

Furthermore, the fact that all of these items are Rasch-calibrated, means that each item has been tested on the same population, and its degree of difficulty has been mathematically calculated so that a user has a fairly accurate idea of how hard a problem, or group of problems, is.

Therefore, a user can: obtain a test which is appropriate to what his/her students have been taught; select the level of

difficulty of the test problems; and be assured of the quality of them.

In turn, by using the item bank (repeatedly), teachers and evaluators can be fairly certain that test scores are valid and reliable measures of Title I Migrant Project impact, not only on individual classes, but on the entire Wisconsin Migrant Program, thus paving the way for assessing future goals in Migrant Education.

The remaining text is divided into the following parts:

Part II is an explanation of the procedure by which a teacher requests a test from the Item Bank terminal (Located in the Title I Migrant Education Office). Part II assumes that the teacher does not have direct access to either a computer terminal, or the software developed under the 143 project.

Part III, on basic micro computer operation, assumes that the teacher does have direct access to both the necessary hardware and software, and can assemble the test themselves, regardless of their computer background. A deliberate attempt has been made to make the text and instructions in Part III (and IV) readily understandable, and it is assumed that the prospective user is not fully acquainted (if at all) with computer operation. The bulk of the text is therefore devoted to only that information which is directly relevant to the execution of the Item Bank programs. Technicians, who require

fuller explanations behind the programs are referred to the Pascal Handbook, and the Migrant Education Item Bank Summary Report 1982.

Part IV describes in detail the actual Item Bank programs, detailing the nature and execution of each program with the specific purpose of assembling a test.

Part V is a list of the present limitations on the system.

Part VI provides a detailed listing of all the skills, subskills, and definitions of subskills in the present Item Bank.

Part VII contains sample test packets for Elementary and Secondary Mathematics.

PART II: REQUESTING A TEST

One of the main purposes of the item bank is to make valid test formation an easy task for you, the teacher. This, we believe we have done. To order a test by mail or telephone, you must specify the following:

1. The grade-level of the students to be tested.
2. The objectives of the test.

You select the objectives you wish to test your students on, in the list provided under Part VI of this manual. It is necessary to specify the subject area (reading, or mathematics), the Skill area, and the Subskill area. But if you are refering to this manual when requesting a test, you need only specify the Area, and the catalog number listed behind each Subskill. For example, under READING-ELEMENTARY; Phonetic Analysis, you will find the Subskill: "Decoding Consonants." In ordering a test, you would request the items for: "READING/01/01," under the READING-ELEMENTARY section.

With that information, the item bank operator will determine the level of difficulty by the grade-level specified, and select the problems through the use of the calibration which is assigned to each problem in the item bank. At present, due to the limited size of the item bank, it is not necessary to specify test length. This will, however, be required in the future when the item bank is much more extensive.

PART III. THE COMPUTER (Some General Notes)

In explaining the following programs, we are assuming that the reader has access to a micro-computer similar to the APPLE II+, which includes the console (keyboard), CRT (viewing screen), printer, and a one or two drive system.

All of the following computer programs were written on an Apple II+ computer in PASCAL language (UCSD, Version 2.0). The PASCAL language is a "structured" programming language, whose syntax reflects data types that exist in the real world (for example, student records, number sets, mathematical variables) more concisely than other programming languages (particularly BASIC) currently available for use on micro-computers. Because of these principles, PASCAL facilitates the relatively rapid development of Item Bank-related software (computer programs). Further development of the Item Bank may necessitate the conversion of PASCAL software into BASIC to assist in the dissemination of Item Bank software as many existing micro-computers support only BASIC.

The Console

As you can see, the keyboard is very similar to that of a typewriter's, but there are some very important differences, some of which you should be aware in operating the Item Bank. In operating a computer program, you must not only be accurate

ih your requests or commands, you must be perfect. The computer will not allow any errors in spelling or punctuation marks. This fact often leads to a frustrating experience as the operator is not sure exactly what the problem is; he/she just knows the computer is not doing what it is supposed to.

One nice feature, therefore, is the "RESET" key located at the upper-right of your keyboard. In the event that you become hopelessly lost in your commands, or if the computer becomes totally unresponsive, you have the option to "reset" the computer. By pushing the reset key, you will re-boot the system, and beable to begin anew.

The Software

All of the information contained in the Item Bank, including the computer programs themselves, exist on the storage medium called: "floppy disks." These are the thin, black, square-shaped disks which are inserted into the drive systems. Each of these disks is labeled, and the label is usually an abbreviated form of the program written on it. Note, particularly, the "boot" disk, which is either labeled as such, or as a disk which is already familiar to you. This is the first disk you will need anytime you intend to execute any of the Item Bank programs.

The Item Bank Data Source

The Item Bank was designed to handle any data source

consisting of Rasch-calibrated items. Currently, however, the Migrant Item Bank consists exclusively of items taken from the SAMPLE ASSESSMENT EXERCISES MANUAL (for Proficiency Assessment), Volume I, produced by the California State Department of Education. It is important to realize the following distinctions between the headings contained in this Item Bank, and those listed in the California Manual:

Content Area = Migrant Item Bank "AREA"
Subcontent Area = Migrant Item Bank "SKILL"
Skill = Migrant Item Bank "SubskilI"

Getting Started

The first task of the user is to "boot" the system, and this is done by inserting the "boot" disk into the drive system and turning on the computer (or if the computer is already on, by pressing "RESET"). Once the computer system is booted, the user--depending on whether it is a one or two drive system--will either remove the boot disk and insert the desired program disk, or simply insert the program disk into the second drive system. Without exception, the computer must be booted before any of the Item Bank programs can be utilized!

Once you have successfully booted the system, you are at the upper-most command level of the computer, and are ready to execute any of the following programs:

PART IV. ASSEMBLING THE TEST

The Item Bank Programs

1. The LIB:LOOKUP Program

The LOOKUP Program, contained in the floppy disk marked: LIB:, is initially the most important disk you can access, and it is especially recommended for new users. While the program's main function is to provide a library of item characteristics, you will also find helpful step-by-step directions which will familiarize command-level instructions--common to all programs in the item bank--in addition to directions for accessing the library itself.

To access the program, LIB:LOOKUP, you must first "boot" the system by inserting the boot disk, as mentioned earlier. Once this is done, insert the floppy-disk marked: "LIB:" into the second drive, or (if you are using a one-drive system) remove your boot disk and insert "LIB:" into Drive 1.

You are now at the upper-most command level and on your screen you should read the following:

Command: E<dit, R<un, F<ile, C<omp, X<ecute, D<ebug,?

The computer is now asking you what you would like to do; it is waiting for your instructions. For Item Bank purposes, you need only know how to "execute" a program, and in the command

level above, you will note: X<ecute.

In the command level, it is necessary only to press the first letter of any command, hence "X" for "X<ecute". Any time the computer is not asking you for a one-key response, however, (as in the case directly below), it is necessary to press "RETURN" before the computer will act on your command. To execute a file, then, push the "X" key on your console.

(For the curious, the instructions to, and functions of, the other command-level options are well-documented in the Pascal Handbook.)

Having done so, you should now be able to read on your screen:

"Execute what file?"

Again, the computer is asking you a question, and you must answer it to proceed. (This time by typing in the entire command, and not by simply pushing one key.) You could execute any program at this point, depending on which program (floppy disk) you inserted into the drive system. In this case, of course, you should have already inserted the "LIB:" program as that is the program we wish to access. Therefore, in answering the computer's question, you must type in (exactly as it is written below):

LIB:LOOKUP

After a brief pause, you should see a paragraph beginning with: "Welcome to the Migrant Item Bank Library Visual Access

Program 'LOOKUP'..."

You may now either ask for further instructions by pressing the H)elp key on the console, or you may press "RETURN" and access the Item Characteristics file immediately.

By depressing the key "H", you will have the opportunity to have the entire LOOKUP program explained to you, as well as definitions of the various command options available. If you choose the H<elp option, you must specify whether you want G<eneral help, (which is strongly advised for new users of the system), or one of the other options, which will give you self-referential definitions.

For example, in the H<elp mode you may depress the V<iew key; in doing so, the computer will explain to you what the V<iew key does. Another important example is the F<ile option, which, once depressed, lists the actual item characteristic files in the library.

If you are already familiar with both the LOOKUP program, and the basic operation of the computer, press "RETURN" and the computer will put you into the actual list of files.

In accessing these files you are given a choice between the two major classifications: Reading, and Math, and whether you want items for elementary or secondary students. The computer lists these options as:

1. rte:items READING/ELEMENTARY
2. rts:items READING/SECONDARY
3. mte:items MATH/ELEMENTARY

4. mts:items MATH/SECONDARY

Once you press the number of the file you wish to view, you are at the sub-command level of that file, and you should see on your screen:

>Lookup: V<iew, N<ext, F<ile, H<elp, Q<uit

At this point, if everything is clear to you, you will want to press the "V" key, for viewing the item characteristics. (If not, then press "H" and you will be returned to the H<elp mode.) After pressing the V<iew key, you should see:

>View: S)earch R)eference

You now have several ways to view item characteristics, some being more direct than others: If you wish to check over the available item characteristics, simply depress the "R" key for Reference, at which point the computer will ask:

"Reference which record?"

All files begin with Record 0 (zero), not Record 1, and so by depressing "0" on the console, you will access the first item characteristic in the file you have chosen. (You could specify any record, but Record 0 is a good place to start a

general survey).

At the top of the screen, you should see a list of commands, including: N)ext. By pressing the "N" key, you will access the very next item characteristic in the file; press "N" again and you will see the third item characteristic in that file, and so on, until you either exit from the file by depressing "Q" or by depressing one of the other keys.

If, instead, you depress the S)earch key, you will read:

>Search by: N)umber W)ord

Now you may do one of two things: If you know the actual numbers associated with item characteristics (The numbers correspond to those listed in California's Sample Assessment Exercises Manual, and are listed towards the end of this Manual), you can access those items by depressing "N" and listing the Area, Skill number, and Subskill number. (Remember to press "RETURN" after each command!)

Otherwise, and more likely, you know a particular Skill area that you would like to test, and so by depressing the W)ord key, you will be asked to supply the Area (Reading or Math), the Skill (Comprehension, for example,) and perhaps even the Subskill area (General Word Meanings, for example). The computer will then search the files until it finds the file which you specified and display it on the screen. If you wish to see the other item characteristics under the Skill which

you specified, simply press the N(ext key, and the computer will automatically search for the next file under the same Skill Area.

2. The PRINTEST Program

The PRINTEST Program, contained in the floppy disk by the same name, is the main program to be used with the Item Bank. With this program, you specify basically the same information as you do with the LIB:LOOKUP Program, only the computer will now scan the Item Bank and assemble a test suited to your order.

The first step is to X<ecute:

PRINTEST

Having done this, you should read on your screen:

Specify Grade Level:

Once you specify which grade-level you are testing, the computer will ask you for a title to your test:

Test Description?

You may specify what you like, for instance: "6th Grade Math Test on Multiplication and Division. April 12, 1982." Now, the computer will automatically instruct you as to what Item Bank disk you should insert, or have inserted, into one of the

disk drives. In this case, it would say:

Insert CMTE:CITEMS into Drive System and press <RETURN>

After a few moments, and some lines on the screen which you may ignore, you will find some sensible instructions at the bottom of the list, namely:

Skill #

Here, you must specify the number of the Skill Area you are testing, using two digits (any one-digit number must be preceded by a "0"). In catalog MATH/04/03, your first number is: 04. After you punch the Skill number in, the computer will ask for your:

Subskill #

Using the above example again, you would punch in 03 as the Subskill you wish to test. The computer will now search the Item Bank for all items, or test problems, which match your specifications, which in this case are: all math items currently on file that test Multiplying Whole Numbers, and are geared for the sixth grade level of difficulty, as determined through the Rasch calibration system.

When the computer has exhausted its supply of the specified

items, it will randomly select from those items meeting the proper specifications, and print them. When the computer completes its selection from the requested Subskill, it will ask you for another Subskill under the same Skill. You may either specify another, or by, pressing RETURN, you will beable to specify a new Skill Area, as well as a Subskill Area, and add more problems to your test.

Once you have as many problems, or types of problems as you want for the given test, press RETURN in response to Subskill #, and Skill #, and the computer will stop searching its files, and begin to print the table of correct answers (Section 2) for the problems on the test.

In the table provided with each test, you will find not only the answer to each problem, but the Skill and Subskill numbers for that problem, in addition to the problem's actual calibration. Finally, the computer will ask:

Do you wish item profiles?

If you press Y(es, the computer will respond:

Put in Diskette LIB: and press <RETURN>

Diskette LIB: contains the item characteristics, some of which you had specified on your test, and which will be printed as Section 3 of your test packet.

To summarize: when ordering or compiling a test of your own, you will receive three parts, which comprise the test packet.

First, you will have a specified number of test problems to be administered to your students; secondly, you will have a separate page which contains the correct answers to each problem on the test, as well as other pertinent information; and thirdly, if requested, the test will also be accompanied by a list of the Skill and Subskill Areas you have specified on the test. This, of course, is useful for retaining accurate records of what your students have been tested on.

V. PRESENT SYSTEM LIMITATIONS

There are a number of problem types which the Item Bank cannot handle in its present, which are:

1. Mathematical problems which employ characters which are, as yet, unrepresented on the keyboard, particularly the symbols for division.

2. Story problems which are excessively long.

3. Problems which utilize graphic illustrations or external tables, particularly in certain Geometry and Measurement problems.

VI. ITEMS ON FILE

Below are lists of all of the items currently on file, classified by their Objective (Reading, or Math), their Skill Area, and their Subskill Area. Below each heading you will find a short description of the format of that particular Subskill area. If you wish to access any of the following files, first insert the floppy disk whose name is written next to the Objective. Then, after executing the program, and entering the file name, press V<iew, then S<earch, then the corresponding information in front of the skill area you wish to access. You can also find an explanation of the Subskill areas on the program LIB:LOOKUP.

1. READING--ELEMENTARY (CRTE:)

A. Phonetic Analysis

1. (READING/01/01) Decoding consonants
Given a consonant or a combination of consonants in a word used in a passage, the student will select from four words the one with the same letter-to-sound correspondance as the test consonant.

2. (READING/01/02) Decoding variant consonants
Given a variant consonant in a word used in a passage, the student will select from four words the one with the same letter-to-sound correspondence as the test consonant.

3. (READING/01/03) Decoding vowels
Given a single vowel or diphthong in a word used in a passage, the student will select from four words the one that contains the same sound as the test vowel or diphthong.

4. (READING/01/04) Decoding spelling patterns
Given a spelling pattern in a word used in a passage, the

student will select from four words the one that contains the same sound as the spelling pattern in the question.

B. Structural Analysis

1. (READING/02/01) Prefixes
Given a prefix in a word used in a passage, the student will select from four options the one that correctly identifies how the prefix alters the meaning of the root word.

2. (READING/02/02) Derivational Suffixes
Given a derivational suffix in a word used in a passage, the student will select from four options the one that correctly identifies how the suffix alters the meaning of the root word.

3. (READING/02/03) Inflectional Suffixes
Given an inflectional suffix in a word used in a passage, the student will select from four options the one that correctly identifies how the suffix alters the meaning of the root word.

4. (READING/02/04) Compound Words
Given a compound word used in a passage, the student will select from four options the one with the test word accurately divided into its two component words.

5. (READING/02/05) Recognizing Root Words
Given a root word that has an inflectional ending and is used in a passage, the student will select from four options the one that represents the root without the inflectional ending.

6. (READING/02/06) Infinitives of Irregular Verbs
Given an irregular verb form used in a passage, the student will select from four options the infinitive form of the verb.

7. (READING/02/07) Contractions
Given a contraction used in a passage, the student will select from four options the one that is equivalent to the contraction.

C. Vocabulary

1. (READING/03/01) General Word Meanings
Given a word used in a passage, the student will select from four definitions the one closest to the meaning of the test word as it is used in the passage.

2. (READING/03/02) Recognizing Synonyms
Given a word used in a passage, the student will select from four one-word options the one that is a synonym of the test word as it is used in the passage.

3. (READING/03/03) Homographs
Given a homograph or multiple meaning word used in a passage, the student will select from four definitions the one closest to the meaning of the test word as it is used in a passage.

4. (READING/03/04) Homophones
Given a homophone used in a passage, the student will select from four definitions the one closest to the meaning of the test word as it is used in the passage.

5. (READING/03/05) Recognizing Antonyms
Given a word used in a passage, the student will select from four options the one that is opposite in meaning to the test word as it is used in the passage.

6. (READING/03/06) Word Meanings in Context
Given a word used in a passage in such a way that its meaning can be inferred from context, the student will select from four options the one closest to the meaning of the test word as it is used in the passage.

D. Comprehension

1. (READING/04/01) Specific Details--Single Sentence
Given a statement or question derived from a single sentence in a passage, the student will select from four options the one that completes the statement or answers the question verbatim in accordance with the language of the given sentence.

2. (READING/04/02) Specific Details (Multiple Sentences)
Given a statement or question derived from two or three sentences in a passage, the student will select from four options the one that completes the statement or answers the question correctly using the language of the given sentences.

3. (READING/04/03) References in Connected Discourse
Given a question derived from a sentence that refers to another word, phrase, or sentence in a passage, the student will select from four options the one that is the actual referent (the word, phrse, or sentence to which reference is made).

4. (READING/04/04) Sequence of Events in Reading Passages
Given a question regarding the sequence of events described in a passage, the student will select from four options the one that answers the question correctly.

5. (READING/04/05) Cause-and-Effect Relationships
Given a question or statement regarding a cause-and-effect relationship in a passage, the student will select from four options the one that correctly relates the cause with the effect.

(Please note that the following are located on floppy disk: CRTE2:)

6. (READING/04/06) Recognizing Main Idea in Passage
Given a statement regarding what a passage is primarily concerned with, the student will select from four options the one that identifies the main idea of the passage.

7. (READING/04/07) Inference from Information in Passage
Given a question or statement requiring the student to make an inference that is logically implied in a passage, the student will select from four options the one that corresponds to that inference.

8. (READING/04/08) Recognizing facts and opinions
Given four statements from a passage, the student will select the one that is a fact or the one that is an opinion.

9. (READING/04/09) Judgements Regarding Author's Purpose/Attitude
Given a question or statement requiring the student to make a critical judgement regarding the author's purpose or attitude in a passage, the student will select from four options the one that corresponds to that judgement.

10. (READING/04/10) Judgements Regarding Ideas or Information
Given a question or statement requiring the student to make a critical judgement about material in a passage, the student will select from four options the one that corresponds to that judgement.

2. READING--SECONDARY (CRTS:)

A. Structural Analysis

1. (READING/01/01) Prefixes
Given a prefix in a word that is used in a passage, the student will select from four options the one that correctly identifies how the prefix alters the meaning of the root word.

2. (READING/01/02) Derivational Suffixes
Given a derivational suffix in a word that is used in the passage, the student will select from four options the one that correctly identifies how the suffix alters the meaning of the root word.

3. (READING/01/03) Inflectional Suffixes
Given an inflectional suffix in a word that is used in the passage, the student will select from four options the one that correctly identifies how the suffix alters the meaning of the root word.

4. (READING/01/04) Compound Words
Given a compound word that is used in the passage, the student will select from four options the one that accurately divides the word into its two compound words.

5. (READING/01/05) Infinitives of Irregular Verbs
Given an irregular verb form that is used in the passage, the student will select from four options the infinitive form of the verb.

6. (READING/01/06) Contractions
Given a contraction that is used in the passage, the student will select from four options the one that is equivalent to the contraction.

B. Vocabulary

1. (READING/02/01) Recognizing General Word Meanings
Given a word that is used in the passage, the student will select from four definitions the one that most closely defines the test word as it is used in the passage.

2. (READING/02/02) Recognizing Synonyms
Given a word that is used in the passage, the student will select from four one-word options the one that is a synonym of the test word as it is used in the passage.

3. (READING/02/03) Homographs
Given a homograph or multiple meaning word that is used in the passage, the student will select from four definitions

the one that most closely defines the given word as it is used in the passage.

4. (READING/02/04) Homophones
Given a homophone that is used in the passage, the student will select from four definitions the one that most closely defines the test word as it is used in the passage.

5. (READING/02/05) Recognizing Antonyms
Given a word that is used in the passsage, the student will select from four options the one that is opposite in meaning to the test word as it is used in the passage.

6. (READING/02/06) Word Meanings in Context
Given a word that is used in the passage in such a way that its meaning can be inferred from context and that is designated at least three grade levels above the readability level of the passage, the student will select from four options the one that most closely defines the test word as it is used in the passage.

C. Comprehension

1. (READING/03/01) Specific Details--Single Sentence
Given a statement or question derived from a single sentence within the passage, the student will select from four options the one that completes the statement or answers the question verbatim according to the language of the given sentence.

2. (READING/03/02) Specific Details--Multiple Sentences
Given a statement or question derived from two or three sentences within the passage, the student will select from four options the one that completes the statement or answers the question correctly.

3. (READING/03/03) References in Connected Discourse
Given a question or statement derived from a sentence that refers to another word, phrase, or sentence within the passage, the student will select from four options the one that is the actual referent (the word, phrase, or sentence to which reference is made).

4. (READING/03/04) Sequence of Elements in Passage
Given a question regarding the sequence of various elements within the passage, the student will select from four options the one that answers the question correctly.

5. (READING/03/05) Cause and Effect Relationships
Given a question or statement regarding a cause-and-effect relationship within the passage, the student will select from four options the one that correctly relates the cause with the effect.

6. (READING/03/06) Main Idea of Passage
Given a statement regarding what the passage is mostly about, the student will select from four options the one that identifies the main idea of the passage.

7. (READING/03/07) Inferring Meaning from Information
Given a question or statement requiring the student to make an inference that is logically implied in the passage, the student will select from four options the one that corresponds to that inference.

8. (READING/03/08) Judgements Regarding Author's Purpose
(A) Given one or more statements from the passage, the student will select from two options the one that accurately classifies the statement(s) as fact/opinion.

9. (READING/03/09) Judgements Regarding Author's Purpose
(B) Given four statements from the passage, the student will select the statement that is a fact/an opinion.

10. (READING/03/10) Judgements Regarding Author's Purpose
Given a question or statement requiring the student to make a critical judgement about material within the passage, the student will select from four options the one that corresponds to that judgement.

3. MATHEMATICS--ELEMENTARY (CMTE:)

A. Knowledge of Arithmetic Facts

1. (MATH/01/01) Addition/Subtraction Terminology
Given a statement requesting the identification of a basic arithmetic operation, the student will select the correct operation from four options.

2. (MATH/01/02) Multiplication/Division Terminology
Given a statement requesting the identification of a basic arithmetic operation, the student will select the correct operation from four options.

3. (MATH/01/03) Recalling Basic Addition Facts
Given two numbers, the student will add them and select the correct answer from four options.

4. (MATH/01/04) Recalling Basic Subtraction Facts
Given two numbers, the student will subtract them and select the correct answer from four options.

5. (MATH/01/05) Recalling Basic Multiplication Facts
Given two numbers, the student will multiply them and select the correct answer from four options.

6. (MATH/01/07) Recognizing Arithmetic Symbols
Given a statement requesting the identification of one of the symbols for the basic arithmetic operations, the student will select the correct answer from four options.

7. (MATH/01/08) Symbols of Equality and Relationship
Given a question requesting the identification of the symbols for equality, inequality, or order relationship, thee student will identify the symbol and select the correct answer from four options.

B. Arithmetic Computation

1. (MATH/02/01) Adding Whole Numbers
Given two numbers, the student will add them and select the correct answer from four options.

2. (MATH/02/02) Adding Whole Numbers with Renaming
Given two or more numbers, the student will add them and select the correct answer from four options.

3. (MATH/02/03) Subtracting Whole Numbers
Given two numbers, the student will subtract them and select the correct answer from four options.

4. (MATH/02/04) Subtracting Whole Numbers with Renaming
Given two numbers, the student will subtract them and select the correct answer from four options.

5. (MATH/02/05) Multiplying Whole Numbers
Given two numbers, the student will multiply them and select the correct answer from four options.

6. (MATH/02/06) Multiplying Whole Numbers with Renaming
Given two numbers, the student will multiply them and select the correct answer from four options.

7. (MATH/02/08) Adding Common Fractions--Like Denominators
Given two or three common fractions, the student will add them and select the correct answer from four options.

8. (MATH/02/09) Subtracting common Fractions--Like Denominators
Given two common fractions, the student will subtract them and select the correct answer from four options.

9. (MATH/02/10) Adding/Subtracting Mixed Numbers--Like Denom.
Given two mixed numbers, the student will perform the necessary operation and select the correct answer from fo four options.

10. (MATH/02/11) Adding Decimal Fractions
Given two or three decimal numbers, the student will add them and select the correct answer from four options.

11. (MATH/02/12) Subtracting Decimal Fractions
Given two decimal numbers, the student will subtract them and select the correct answer from four options.

12. (MATH/02/13) Multiplying Decimal Fractions
Given a decimal fraction and a whole number, the student will multiply them and select the correct answer from four options.

13. (MATH/02/14) Estimating Whole Number Sums/Differences
Given two or more whole numbers with accompanying directions, the student will estimate the answer and select the correct response from four options.

14. (MATH/02/15) Estimating Whole Number Products/Differences
Given two whole numbers with accompanying directions, the student will estimate the answer and select the correct response from four options.

C. Arithmetic Comprehension

1. (MATH/03/01) Reading, Writing, and Expressing Place Value

Given a number expressed in words with accompanying directions, the student will translate the words into numerals and select the correct answer from four options.

2. (MATH/03/02) Place Value of a Given Digit in a Number
Given a number statement, the student will identify the place value of a digit and select the correct answer from fou options.

3. (MATH/03/04) Ordering and Comparing Whole Numbers
Given two numbers, the student will either identify a number between the two given numbers or identify a descending or ascending list of numbers and select the correct answer from four options.

4. (MATH/03/05) Identifying Multiples of a Given Number
Given a number, the student will identify multiples of that number; or given multiples of a number, the student will identify the number and select the correct answer from four options.

5. (MATH/03/06) Recognizing and Extending Number Patterns
Given an interrupted sequence of numbers, the student will determine the functional interrelationship of the numbers in the sequence to identify a missing number and select the correct answer from four options.

6. (MATH/03/09) Identifying Equivalent Fractions
Given a fraction, the student will select an equivalent fraction from four options.

D. Arithmetic Applications

1. (MATH/04/02) Subtracting Whole Numbers
Given a "story" problem, the student will solve the problem and select the correct answer from four options.

2. (MATH/04/03) Adding and Subtracting Whole Numbers
Given a "story" problem, the student will solve the problem and select the correct answer from four options.

3. (MATH/04/04) Multiplying Whole Numbers
Given a "story" problem, the student will solve the problem and select the correct answer from four options.

4. (MATH/04/05) Dividing Whole Numbers
Given a "story" problem, the student will solve the problem and select the correct answer from four options.

5. (MATH/04/06) Adding Decimal Fractions
Given a "story" problem, the student will solve the problem and select the correct answer from four options.

6. (MATH/04/08) Multiplying Decimal Fractions
Given a "story" problem, the student will solve the problem and select the correct answer from four options.

7. (MATH/04/09) Estimating Answers to Word Problems
Given a "story" problem, the student will solve the problem and select the correct answer from four options.

8. (MATH/04/10) Using Problem Analysis Techniques
Given a "story" problem, the student will identify a technique for problem analysis and select the correct anwer from four options.

E. Expressions, Equations, and Formulas

1. (MATH/05/01) Simple Expressions: Addition/Subtraction
Given a simple algebraic expression, the student will solve the problem and select the correct answer from four options.

2. (MATH/05/02) Solving Equations: Addition/Subtraction
Given a simple linear equation, the student will solve the problem and select the correct answer from four options.

F. Measurement

1. (MATH/07/01) Estimating and Choosing the Measure of Familiar Objects and Distances
Given a measurement problem, the student will solve the problem and select the correct answer from four options.

2. (MATH/07/02) Renaming within U.S. Customary and Standard International Metric System of Measurement
Given a unit of measurement, the student will rename within the same system of measurement and select the correct answer from four options.

3. (MATH/07/06) Calculating with Units of Time
Given a problem involving time, the student will solve the problem and select the correct answer from four options.

4. MATHEMATICS--SECONDARY (CMTS:)

A. Knowledge of Arithmetic Facts

1. (MATH/01/01) Addition/Subtraction Terminology
Given a statement requesting the identification of a basic arithmetic operation that must be performed to achieve a particular result, the student must identify the operation from four options.

2. (MATH/01/02) Multiplication/Division Terminology
Given a statement requesting the identification of a basic arithmetic operation that must be performed to achieve a particular result, the student must identify the operation from four options.

3. (MATH/01/03) Recalling Basic Addition Facts
Given two numbers aligned either vertically or horizontally with a correctly positioned addition sign, the student will add the two numbers and select the correct answer from four options.

4. (MATH/01/04) Recalling Basic Subtraction Facts
Given two numbers aligned either vertically or horizontally with a correctly positioned subtraction sign, the student will subtract the numbers and select the correct answer from four options.

5. (MATH/01/05) Recalling Basic Multiplication Facts
Given two numbers aligned either vertically or horizontally with a correctly positioned multiplication sign, the student will multiply the two numbers and select the correct answer from four options.

6. (MATH/01/06) Recalling Basic Division Facts
Given two numbers, the student will divide them and select the correct answer from four options.

7. (MATH/01/07) Recognizing Basic Mathematical Symbols
Given a symbol indicating one of the basic arithmetic operations, the student will identify which operation is being described and select the correct answer from four options.

8. (MATH/01/08) Symbols for Equality or Order Relationships
Given a symbol, the student will determine if the symbol means equal to, not equal to, greater than, or less than and then select the correct answer from four options. No additional outside directions will be given.

B. Arithmetic Computation

1. (MATH/02/01) Adding Whole Numbers without Renaming
Given two numbers aligned vertically or horizontally with

a correctly positioned addition sign, or with numbers presented in sentence form, the student will add the two numbers and select the correct answer from four options. The student will not be required to rename or "carry over" digits from one column to the next.

2. (MATH/02/02) Adding Whole Numbers with Renaming
Given two or more numbers aligned vertically or horizontally with a correctly positioned addition sign (where necessary), the student will add the numbers and select the correct answer from four options. The student will be required to rename or "carry over" digits from one column to the next.

3. (MATH/02/03) Subtracting Whole Numbers w/out Renaming
Given two numbers aligned vertically or horizontally with a correctly positioned subtraction symbol, or given two numbers in sentence form, the student will subtract the two numbers and select the correct answer from four options. The student will not be required to rename or "borrow" digits from one column to the next.

4. (MATH/02/04) Subtracting Whole Numbers with Renaming
Given two numbers aligned vertically or horizontally with a correctly positioned subtraction symbol, or given two numbers in sentence form, the student will subtract the numbers and select the correct answer from four options. The student will be required to rename or "borrow" digits from one column to the next.

5. (MATH/02/05) Multiplying Whole Numbers--No Renaming
Given two numbers aligned vertically or horizontally with a correctly positioned multiplication symbol, the student will multiply the numbers and select the correct answer from four options. The student will not be required to rename or "carry over" digits from one column to the next.

6. (MATH/02/06) Multiplying Whole Numbers--Renaming
Given two numbers aligned vertically or horizontally with a correctly positioned multiplication symbol, the student will multiply the numbers and select the correct answer from four options. The student will be required to rename or "carry over" digits from one column to the next.

7. (MATH/02/07) Dividing Whole Numbers--No Renaming
Given two numbers displayed with a correctly positioned division symbol or with accompanying verbal directions, the student will divide the numbers and select the correct answer from four o options.

8. (MATH/02/08) Dividing Whole Numbers--Renaming
Given two numbers displayed with a correctly positioned division symbol or with acceompanying verbal directions, the student will

divide the numbers and select the correct answer from four options. The student will be required to calculate a remainder.

9. (MATH/02/09) Adding Common Fractions--Same Denominator
Given two or three common fractions aligned horizontally or vertically, with or without accompanying verbal directions, the student will add the fractions and select the correct answer from four options.

10. (MATH/02/10) Adding Common Fractions--Different Denominator
Given two or three fractions aligned horizontally or vertically, alone or with accompanying verbal directions, the student will find the common denominators for the addends, add the fractions, and select the correct answer from four options.

11. (MATH/02/11) Adding Decimal Fractions
Given two, three, or four addends containing decimals and aligned horizontally or vertically or presented with accompanying verbal directions, the student will add the fractions and select the correct answer from four options.

12. (MATH/02/12) Subtracting Common Fractions
Given two fractions aligned vertically with a correctly positioned subtraction symbol or presented with accompanying verbal directions, the student will subtract the fractions and select the correct answer from four options.

13. (MATH/02/13) Subtracting Decimal Fractions
Given two fractions aligned vertically or horizontally with a correctly positioned subtraction symbol or presented with accompanying verbal directions, the student will subtract the fractions and select the correct answer from four options.

14. (MATH/02/14) Multiplying Common Fractions
Given two or three fractions aligned vertically or horizontally with a correctly positioned multiplication symbol or presented with accompanying verbal directions, the student will multiply the fractions and select the correct answer from four options.

15. (MATH/02/15) Multiplying Decimal Fractions
Given two decimal fractions aligned horizontally or vertically with a correctly positioned multiplication symbol or presented with accompanying verbal directions, the student will multiply the two fractions and select the correct answer from four options.

16. (MATH/02/16) Dividing Common Fractions
Given two common fractions aligned horizontally as a compound fraction with a correctly positioned division sign or presented with accompanying verbal directions, the student will divide the two fractions and select the correct answer from four op options.

17. (MATH/02/17) Dividing Decimal Fractions
Given two decimal fractions with a correctly positioned division symbol or with accompanying verbal directions, the student will divide the two fractions and select the correct answer from four options.

18. (MATH/02/18) Converting Common Fractions to Decimal Fractions
Given a common fraction with accompanying verbal directions, the student will convert the fraction into its decimal equivalen and select the correct answer from four options.

19. (MATH/02/19) Converting Decimal Fractions to Common Fractions
Given a decimal fraction with accompanying verbal directions the student will convert the decimal into its common fraction and select the correct answer from four options.

20. (MATH/02/20) Converting Common/Decimal Fractions to Percents
Given a common or decimal fraction with accompanying verbal directions, the student will convert the fraction into a percent and select the correct answer from four options.

21. (MATH/02/21) Converting %cents into Common/Decimal Fractions
Given a percent with accompanying verbal directions, the student will convert the percent to a common or a decimal fraction and select the correct answer from four options.

C. Arithmetic Comprehension.

1. (MATH/03/01) Reading/Writing/Expressing Place Value
Given a number greater than 9 expressed in words, the student will translate the words into numerals and select the correct answer from four options.

2. (MATH/03/02) Place Value of a given Digit in Number
Given a number, the student will identify the value of a given digit within the number and select the correct response from four options.

3. (MATH/03/03) Identifying the Factors of a Given Number
Given a number, the student will select from four options the one that includes all th factors of the given number.

4. (MATH/03/04) Identifying Multiples of a Given Number
Given a number, the student will determine the next four multiples of that number, or given the multiples of a number, the student will determine the number and select the correct answer from four options.

5. (MATH/03/05) Ordering and Comparing Common Fractions
Given two common fractions, the student will determine a

fraction that is between the values of the given fractions; or the student will be asked to determine a descending or ascending listing of common fractions and then select the correct answer from four options.

6. (MATH/03/06) Recognizing and Extending Number Patterns
Given a sequence of numbers, the student will determine their functional interrelationship to find the next number in the sequence and then will select the correct answer from four options.

D. Arithmetic Applications

1. (MATH/04/03) Multiplying Whole Numbers
Given a "story" problem, the student will read the problem, determine the operation required to solve the problem, multiply the appropriate numbers, and then select the correct answer from four options.

2. (MATH/04/05) Multiplying Decimal Fractions
Given a "story" problem, the student will read the problem, determine the operation required to solve the problem, multiply the appropriate numbers, and then select the correct answer from four options.

3. (MATH/04/08) Adding and Dividing Decimal Fractions
Given a "story" problem, the student will read the problem, determine the sequence of operations required to solve the problem, add and divide the appropriate numbers, and then select the correct answer from four options.

4. (MATH/04/09) Dividing Decimal Fractions
Given a "story" problem, the student will read the problem, determine the operation required to solve the problem, divide the appropriate number, and then select the correct answer from four options.

5. (MATH/04/10) Subtracting Mixed Numbers
Given a "story" problem, the student will read the problem, determine the operation required to solve the problem, perform the subtraction, and then select the correct answer from four options.

6. (MATH/04/11) Multiplying Common Fractions
Given a "story" problem, the student will read the problem, determine the operation required to solve the problem, perform the multiplication, and then select the correct answer from four options.

7. (MATH/04/12) Applying Percents to Determine Discounts
Given a "sill read the problem,

determine the sequence of operations required to solve the problem, calculate the amount of the discount, and then select this amount from four options.

8. (MATH/04/13) Applying_percents_in_Non-Money_Context
Given a "story" problem, the student will read the problem, determine the sequence of operations required to solve the problem, perform the calculation, and then select the correct answer from four options.

9. (MATH/04/14) Calculating_Percents
Given a "story" problem, the student will read the problem, determine the sequence of operations required to solve the problem, calculate the percentage, then select the correct answer from four options.

10. (MATH/04/15) Using_Ratios_and_Proportions
Given a "story" problem, the student will read the problem, determine the sequence of operations required to solve the problem, apply a ratio or proportion, and then select the correct answer from four options.

E. Expressions, Equations, and Formulas

1. (MATH/05/01) Simple_Expressions:__Addition/Subtraction
Given a simple algebraic expression, the student will calculate the value of an unknown quantity in the expression and selec the correct answer from four options.

2. (MATH/05/02) Simple_Expressions:__Addition/Sub/Multiplication
Given a simple algebraic expression, the student will calculate the value of an unknown quantity in the expression and select the correct answer from four options.

3. (MATH/05/03) Simple_Expressions:__Add/Sub/Mult/Division
Given a simple algebraic expression, the student will calculate the value of an unknown quantity in the expression and select the correct answer from four options.

4. (MATH/05/04) Solving_Equations_Using_Addition_or_Subtraction
Given a simple linear equation, the student will add or subtract to calculate the value of an unknown quantity in the equation; the student will then select the correct answer from four options.

5. (MATH/05/05) Solving_Equations:__Multiplication/Division
Given a simple linea equation, the student will calculate the value of an unknown quantity in the equation and select the correct answer from four options.

6. (MATH/05/06) Solving Equations Requiring Two Operations
Given a simple linear equation, the student will perform two operations to calculate the value of an unknown quantity in the equation, and then select the correct answer from four options.

7. (MATH/05/08) Recognizing Simple Consumer Formulas
Given a question requesting the formula for basic consumer decision-making situations, the student will select the correct formula from four options.

8. (MATH/05/09) Recognizing Simple Algebraic Formulas
Given a question requesting the formula for an algebraic solution to a "story" problem, the student will select the correct formula from four options.

9. (MATH/05/10) Evaluating Simple Geometric Formulas
Given a question requiring the use of a common geometric formula, the student will use the formula to compute the correct answer and then select the correct answer from four options.

10. (MATH/05/11) Evaluating Simple Consumer Formulas
Given a question requiring the use of a common consumer formula, the student will use the formula to compute the correct answer and then select the correct answer from four options.

11. (MATH/05/12) Evaluating Simple Algebraic Formulas
Given a question requiring the use of a common algebraic formula, the student will use the formula to compute the correct answer and then select the correct answer from four options.

F. Measurement

1. (MATH/07/01) Estimating and Choosing the Measure of Familiar Objects and Distances
Given (A) an object to be measured, the student will select the appropriate unit of measure; or given (B) two points, the student will choose the appropriate unit of measure and estimate the distance between them, using the chosen appropriate object that best fits the given measure. The correct answer must then be selected from four or five options.

2. (MATH/07/02) Estimating Answers in Appropriate Units of Measurement, given Distance/Rate/Time Problems
Given two of the three quantities, the student will estimate the third, and select the correct answer from four options.

3. (MATH/07/03) Converting withing U.S. Customary and Standard International Metric System of Measurement
Given a unit of measure in one system, the student will make one or two conversions within the same system and then select the correct answer from four options.

4. (MATH/07/08) Calculating with Units of Time
Given a measurement of time, the student will apply the measurement in one of the basic mathematical operations and then select the correct answer from four options.

5. (MATH/07/09) Solving Measurement Problems
Given a "story" problem, the student will use units of measurement to solve the problem, and then select the correct answer from four options.

PART VII. SAMPLE TEST A (ELEMENTARY MATHEMATICS)

1. To find the difference between 5 and 8, you must:

   a) add.
   b) subtract.
   c) multiply.
   d) divide.

2. To find what 3 times another number is, you must:

   a) add.
   b) subtract.
   c) multiply.
   d) divide.

3. To find out how many groups of 3 there are in 15, you must:

   a) add.
   b) subtract.
   c) multiply.
   d) divide.

4.
```
  43
 -25
-----
```

   a) 18
   b) 19
   c) 22
   d) 68

5.
```
  142
  -56
-----
```

   a) 68
   b) 86
   c) 96
   d) 198

6. 153 - 29 =

   a) 36
   b) 94
   c) 124
   d) 136

7. 221
x 4
---

a) 224
b) 225
c) 881
d) 884

8. 112 x 30 =

a) 3,360
b) 33,600
c) 112,000
d) 336,000

9. 22
x 5
---

a) 110
b) 210
c) 225
d) 1,010

10. N = 6
N + 7 = ?

a) 7
b) 13
c) 14
d) 67

11. If D = 11, what is D - 5?

a) 5
b) 6
c) 7
d) 15

12. A = 8
B = 6
A + B = ?

a) 2
b) 8
c) 13
d) 14

Section 2...

Sample Test for Item Bank User's Manual April, 1982 Madison, Wis.

********** FOR GRADE 3 **********

ITEM	SKILL	SUBSKILL	KEY	CALIBRATION
1.	01	01	b	-1.20144E-1
2.	01	02	c	-5.75364E-1
3.	01	02	d	-3.22773E-1
4.	02	04	a	-3.63965E-1
5.	02	04	b	-4.47312E-1
6.	02	04	c	-8.47298E-1
7.	02	05	d	-4.05465E-1
8.	02	05	a	-1.20144E-1
9.	02	06	a	-3.22773E-1
10.	05	01	b	-4.05465E-1
11.	05	01	b	-1.60343E-1
12.	05	01	d	-6.63294E-1

Sample Test for Item Bank User's Manual April, 1982 Madison, Wis.

ITEM PROFILE

****** FOR GRADE 3 *******

MATH
ARITHMETIC FACTS skill = 01
Operational Terminology subskill = 01

Given a statement requesting the identification of a basic arithmetic operation, the student will select the correct operation from four options.

MATH
ARITHMETIC FACTS skill = 01
Operational Terminology subskill = 02

Given a statement requesting the identification of a basic arithmetic operation, the student will select the correct operation from four options.

MATH
COMPUTATION skill = 02
Subtraction-renaming subskill = 04

Given two numbers, the student will subtract them and select the correct answer from four options.

MATH
COMPUTATION skill = 02
Multiplication subskill = 05

Given two numbers, the student will multiply them and select the correct answer from four options.

MATH
COMPUTATION skill = 02
Multiplication-renaming subskill = 06

Given two numbers, the student will multiply them and select the correct answer from four options

MATH
EXPRESSIONS/EQUATIONS/FORMULAS skill = 05
Simple expressions subskill = 01

Given a simple algebraic expression, the student will solve the problem and select the correct answer from four options.

PART VII. SAMPLE TEST B (SECONDARY MATHEMATICS)

1. What is a - d, if a = 34, and d = 17?

   a) 17
   b) 51
   c) 2
   d) 18

2. What is n/8, if n = 72?

   a) 80
   b) 64
   c) 576
   d) 9

3. If x - 5 = 24. then x = ?

   a) 29
   b) 120
   c) 19
   d) 24

4. If x - .15 = 9, then x = ?

   a) 1.35
   b) 8.85
   c) 9.15
   d) 9

5. If x + .75 = 4, then x = ?

   a) 4.75
   b) 3.25
   c) 3.00
   d) 4

6. If x + 1/2 = 4, then x = ?

   a) 4 1/2
   b) 3 1/2
   c) 2
   d) 4

7. If $x - 2/3 = 6$, then $x =$?

a) 4
b) 5 1/3
c) 6
d) 6 2/3

8. If the average rainfall in a state was 2.7 i[redacted] per month, approximately how many inches fall in one year?

a) 3.24 inches
b) 32.4 inches
c) 324 inches
d) None of the above

9. If a total of 5.53 inches of rain fell for 7 days, what was the average rainfall per day?

a) .79 inches
b) .69 inches
c) .49 inches
d) None of the above

10. If Tom's father can drive his car 130.9 miles on 7 gallons of gasoline, how many miles can he drive on one gallon of gasoline?

a) 187 miles
b) 18.7 miles
c) 916.3 miles
d) None of the above

11. On a spelling test, Jane spelled 21 words correctly. If this is 70 percent of the total number of words on the test, how many words were on the test?

a) 7 words
b) 15 words
c) 30 words
d) None of the above

Section 2...

Sample Test for Item Bank User's Manual April, 1982 Madison, Wis.

********** FOR GRADE 9 **********

ITEM	SKILL	SUBSKILL	KEY	CALIBRATION
1.	05	01	a	-1.26567
2.	05	03	d	-1.15268
3.	05	04	a	-1.32493
4.	05	04	c	-5.75364E-1
5.	05	04	b	-7.08185E-1
6.	05	04	b	-1.26567
7.	05	04	d	-1.60343E-1
8.	04	05	b	-8.47298E-1
9.	04	09	a	-4.89548E-1
10.	04	09	b	-5.75364E-1
11.	04	13	c	-5.75364E-1

Sample Test for Item Bank User's Manual April, 1982 Madison, Wis.

ITEM PROFILE

****** FOR GRADE 9 *******

MATH
EXPRESSIONS/EQUATIONS/FORMULAS skill = 05
Simple expressions subskill = 01

Given a simple algebraic expression, the student will calculate the value of an unknown quantity in the expression and select the correct answer from four options.

MATH
EXPRESSIONS/EQUATIONS/FORMULAS skill = 05
Simple expressions subskill = 03

Given a simple algebraic expression, the student will calculate the value of an unknown quantity in the expression and select the correct answer from four options.

MATH
EXPRESSIONS/EQUATIONS/FORMULAS skill = 05
Solving equations subskill = 04

Given a simple linear equation, the student will add or subtract to calculate the value of an unknown quantity in the equation; the student will then select the correct answer from four options.

MATH
APPLICATIONS skill = 04
Multiplying decimals subskill = 05

Given a "story" problem, the student will read the problem, determine the operation required to solve the problem, multiply the appropriate numbers, and then select the correct answer from four options.

MATH
APPLICATIONS skill = 04
Dividing decimals subskill = 09

Given a "story" problem, the student will read the problem, determine the operation required to solve the problem, divide the appropriate number, and then select the correct answer from four options.

MATH
APPLICATIONS skill = 04
Percent in context subskill = 13

Given a "story" problem, the student will read the problem, determine the sequence of operations required to solve the problem, perform the calculation, and then select the correct answer from four options.