

USER'S GUIDE

Nothin' but the Facts Arithmetic Review v2.0

**A Learn, Practice, and Drill Program
for learners of all ages**

(for Windows)

IEPMath

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Minimum Requirements

Minimum System Requirements

- 100% IBM PC-compatible computer
- 486/66 MHz processor
- 6 MB RAM
- Hard Disk Space: 16 MB
- 8-bit Color (256 Color) at 640 x 480 pixel resolution
- 100% Microsoft-compatible mouse and driver
- Microsoft Windows 3.1 / 95 /98
- 100% Microsoft-compatible sound card
- 2x CD-ROM Drive

Recommended System

- Intel Pentium processor or higher
- 8 MB of RAM or higher
- 4x CD-ROM Drive

Minimum User Skills

Minimal computer keyboard and mouse skills are required. Commands are accessed by mouse pointing and clicking. As an alternative, most commands can be accessed by use of the keyboard (See *Appendix C*). The majority of user time is spent providing answers to problems by using the number keys on the keyboard.

User Age: 5 to Adult

Minimum Math Level: None

Features

- Complete program of the arithmetic facts of addition, subtraction, multiplication, and division.
- Three activities: Learn, Practice, and Drill.
- Three skill levels: Beginning, Intermediate, & Advanced.
- Step-by-step interactive instructional techniques.
- Animated **Learn** activity--flashcards that flip to show their answers and **mental arithmetic** tutorials.
- Optional spoken problems, tutorial narration, and sound effects.
- Challenging timed problem sets.
- Readily accessible number-facts tables.
- Problems containing numbers from one to five digits.
- Individual user performance reporting.
- Printed sets of randomly generated problems.
- Color Certificates of Mastery.
- Printed reports.
- Printed flashcards
- Individual drill time settings

Philosophy & Goals

Welcome! **Nothin' but the Facts: Arithmetic Review** (NBTF) is a program that will assist you in learning, memorizing, and mastering the basic arithmetic skills of addition, subtraction, multiplication, and division. It makes use of the time-proven system of mastering these basic facts through learning, practicing, and drilling. The computer provides you the ability to quickly access facts, gives you immediate feedback, keeps track of your progress, and advances you when you have reached mastery. For beginning and intermediate users, the emphasis is on memorization of the number-facts from 1-12, 15, 20, 25, & 50. For advanced users, the emphasis is on **mental arithmetic**--the ability to perform computations in your head without use of calculator, or pencil and paper.

It is the philosophy of **IEPMath** that memorization of facts and the practicing of mental arithmetic are vital in gaining proficiency in the basic arithmetic skills. In an effort to create methods which are fun and stimulating, many products today fall short by failing to include an emphasis on competency in learning the basic facts. NBTF attempts to combine the stimulating and responsive benefits of the computer with the **time-proven** memorization methods of the past. The focus of many programs is for children's use only; **IEPMath** strives to meet the educational needs of both children and adults.

The goals of NBTF are to assist and direct you to:

- Master the basic arithmetic facts of 1 to 12, 15, 20, 25 & 50.
- Demonstrate competency by working problems mentally and within a set period of time. (The problems will consist of the operations of addition, subtraction, multiplication, and division and contain one, two, three, four, and five digits.)
- Gain confidence and maturity that will enable you to learn more advanced mathematical concepts with ease.

Who We Are

IEPMath is an educational software company of teachers and educators whose goal is to create high quality instructional materials with an interactive, learn-and-mastery orientation. Our purpose is to provide instructional curriculum that meets the needs of users of all ages, teachers, parents, and schools in a manner which is comprehensive, effective, and easy to use.

FOR FURTHER ASSISTANCE: Call (909) 880-0820 or write:

IEPMath

PO BOX 54

Lytle Creek, CA 92358

Getting Know You

We at **IEPMath** are interested in knowing about you. Please fill out the enclosed Registration Card. We will:

- Send you information about our other educational software products.
- Send you information regarding new versions of NBTF as soon as they are available.
- Provide you with discounts on all of our products.

Program Format

The basic format of NBTF is quick access and simplicity. After signing in, you can then select one of the three main activities of NBTF.

- **Learn Activity:** In the **Beginning** and **Intermediate** levels, you may select any card from a set of cards placed in sequence. You learn by attempting to answer each card from memory and then flipping the card to view the answer. In the **Advanced** level, you will be presented strategies and examples that will assist you in working problems involving 2, 3, and 4 digits.
- **Practice Activity:** You will be asked to answer problems on cards that are presented at random. You will be provided immediate feedback, and you are to continue working problems until all the cards of a set are answered correctly.
- **Drill Activity:** You will be asked to demonstrate competency of problem sets of 10 by answering all problems correctly within a set period of time. The objective is to obtain mastery of your skill level by progressing through five problem sets of increasing difficulty.

Product Support

Product Support is available to registered users.

Web: support@iepmath.com

America On-line Screen Name: **IEPMath**

You may also call 909-880-0820 and leave a message. Your question(s) will be answered within 24 hours. Please direct your questions to: **IEPMath Technical Support.**

1. Getting Started

Installing the Program

1. Insert the **Nothin' but the Facts** CDROM in your CD drive or disk one in the 3.5" floppy drive.
2. From the **Program Manager** window, click on the **File** menu, and then choose **Run**.
3. In the **Command Line** box, type **e:\setup**. (if your CD or floppy disk drive is not drive "e", type the correct letter instead of the letter "e." For example, if its drive "b", type **b:\setup**.)
4. Follow the instructions displayed. You have the option to customize the installation. If you choose to store the entire program on your hard disk drive, it is comprised of approximately 15 megabytes.
5. The installation will set up an **IEPMath** directory with an icon that can be chosen (double-click the left mouse button) from the **Program Manager**.

Starting the Program

[Win 3.1x]

1. Double-click the **IEPMath** icon from the **Program Manager**.
2. From the *IEPMATH* group window, double-click the **Nothin' but the Facts: Arithmetic Review v2.0** icon to start the program.

[Win 95/98]

1. Click on **Start**.
2. Select **Programs**.
3. Locate the **IEPMath** folder.
4. Select **Arithmetic Review v2.0**

Signing In: The Sign-In screen

The **Sign-In** Screen is where you identify yourself to the program. Click on **New** and type in your name; you may use up to ten letters but **no periods**. Make sure that your name is different from any others that are being used. If another user has the same name as yours, it is suggested that you type the first letter of your last name after your first name (remember, no periods!). The program will now address you by name, and it will track and report your progress. If you wish to change users, you must exit the program by pressing <Esc> or clicking **Exit** located in the lower-right corner of the Main Menu. The program will accommodate ten users at a time.

Upon re-entering the program, note your name, click on it, and then click Start. If you wish to delete a name, click on the name and then click Delete. NBTF keeps records for every activity that you perform within the program. By deleting a name, remember that you are also deleting the records.

How About a Quick Tour?

Why not take a few quick tours before becoming too immersed in the program? There are four tours listed in an easy-to-use format in Appendix A of this User's Guide.

2. Choosing Options

Speech Options & Sound Effects

After signing in and clicking **Start** from the **Sign-In** Screen, you will advance to the **Main Menu**. You should first determine if you wish to hear spoken problems, tutorials, and buttons or an assortment of sound effects. By clicking on **Options** in the lower-left corner, the **Options** dialogue box will appear. This is your opportunity to choose to turn on or off: problems spoken as they appear on the screen, narration of the mental arithmetic tutorials in the Advanced Learn Activity, names of buttons spoken when clicked, and sound effects. Drill times can also be set for each Subject and skill level.

Turning On Spoken Problems

Learning may be enhanced by a multi-sensory approach where seeing and hearing interact with the tactile sense of using the mouse or typing in answers from the keyboard. **NBTF** provides speech of each problem of the **Learn** and **Practice** activities. You may choose this option by clicking the checkbox adjacent to **Numbers**.

Turning On Narrated Tutorials

When the **Tutorials** option is turned on, within the **Advanced Learn** activity, spoken narration accompanies each presentation. You may choose this option by clicking the checkbox adjacent to **Tutorial**.

Turning On Spoken Buttons

When you click on any button, **NBTF** provides the option to have the names of those buttons spoken aloud. You may choose this option by clicking the checkbox adjacent to **Buttons**.

Turning On Sound FX

NBTF provides an interesting assortment of sound effects. Hear various congratulatory sounds when you answer a problem correctly! Why not spice up your studying by turning on the **Sound FX** option? You may choose this option by clicking the checkbox adjacent to **Sound FX**.

Turning On Character Speech

The **Drill** activity contains our friendly characters Dr. Antiquity and Cecil. If you want them to speak the number of problems and time limit, choose the **Character Speech** option by clicking on the checkbox.

Selecting Certificate Color

If you have a color printer, you will be able to select different border colors to print out your Certificates of Mastery. Select a color for either **Color #1** or **Color #2** and press the **Test** button to preview the certificate.

Right to Left

You have the option to display the answer in the **Practice** and **Drill** activity in either right-to-left or left-to-right by selecting this option.

Drill Times

You can change the drill times for each skill level and Subject. To turn the time limit off, simply click on the checkbox next to the level.

3. Selecting an Activity and a Skill Level

The Main Menu

From the Main Menu, you are to choose one of the three main activities, and at the same time, one of the three skill levels.

What Are the Activities?

In starting out, it is suggested that you do the activities in order. The following is a summary of each. For a complete explanation of any of the three activities, please refer to that particular activity's section (Sections 6, 7, or 8) within this User's Guide.

The Learn Activity: In the Beginning and Intermediate skill levels, after first picking a number to study, you will learn the basic facts by studying the number-fact table and then selecting problems by displaying their cards in the Question Box. You will then test yourself, and if you are unsure of any problem, you may “flip” the card to show its answer. You will not be timed, and you may choose any card as many times as you wish. The focus is to study the patterns of each number-fact set. In the Advanced skill level, you will be provided a tutorial of strategies and animated examples of each of the five problem-types covered within each subject.

The Practice Activity: In the Beginning and Intermediate skill levels, after first selecting a number to practice, you will gain competency in the basic facts by typing in the answers to randomly selected problems. These problems are from a complete set of cards that include one of each problem within the chosen number-fact. In the Advanced skill level, after first choosing a problem-type, you will be asked to type in answers from a randomly selected set of problems. For all skill levels, as you answer each problem, immediate feedback is displayed. If the answer is correct, the card is placed into the Mastered or Solved area. If the answer is incorrect, the card is placed back into the Unmastered or Unsolved area to be randomly selected again.

The Drill Activity: You will build competency by challenging yourself to answer timed problem sets of ten problems with 100% accuracy. There are five levels of problem sets for each skill level and subject. Each level is more difficult than the previous, and only after mastering each level can you progress to the next. Upon mastering the fifth level, you will be rewarded by the printing of a NBTF Certificate of Mastery in your honor.

What Are the Skill Levels?

NBTF features three skill levels to accommodate users of all ages based upon their math abilities. When you select an activity, also choose a skill level. In picking a skill level, you are selecting the level of difficulty of the number-facts and problems that you will be studying. The following is a summary of each:

Beginning: This level covers the basic number-facts of 1 - 9. Start in the Learn Activity by working on memorizing number-facts that you have not learned. Concentrate on one subject (Addition, Subtraction, Multiplication, or Division) and one number-fact at a time. Once you feel that you have memorized a complete number-fact set, then progress on to the Practice Activity and choose that same number-fact. After memorizing and practicing a complete subject, proceed to the Drill Activity. Choose the same subject and see how far you can progress towards mastery.

Intermediate: This level covers the number-facts of 8 - 12, 15, 20, 25, 50. It assumes that you have learned all the basic number facts through 9, but need to review the 8's and 9's, learn 10's, 11's, & 12's, and be able to mentally compute problems involving 15, 20, 25, and 50. These last four number-facts are important for everyday use in determining tips, checking money received at an ATM machine, determining correct change, and doing estimation. Be selective so that you spend your study time efficiently. Within the Practice Activity, push yourself by working the problems as quickly as possible. Once you feel that you have sufficiently "brushed-up," then proceed to the Drill Activity to see how far you can progress toward mastery.

Advanced: This level assumes that you are competent in the basic number-facts and wish to become proficient in more difficult addition, subtraction, multiplication, and division problems. This level will teach and give you practice performing mental arithmetic. Mental arithmetic is the ability to quickly compute answers to problems containing numbers of two, three, and four digits without using calculator, or pencil and paper. Within the Learn Activity, you will be provided strategies and animated examples that will demonstrate problems worked from left to right. Within the Practice Activity, push yourself by working the problems as accurately and quickly as possible. Once you feel that you have mastered mental arithmetic, progress on to the Drill Activity. The time limit of each of the five problem sets is minimal. You must work each of the five sets with 100% accuracy. If you reach mastery in any of the subjects within the Drill Activity (Advanced skill level), you are truly a master in the basic arithmetic operations!

Selecting an Activity and Choosing a Skill Level

From the Main Menu, pass the cursor (without clicking) over the activity you wish to select. Note that a Skill Box appears (if it does not, move the cursor off of the activity button, and then move it without clicking back over it). Once you are ready to proceed, choose and click on one of the skill levels.

At any time within the program, to change to another activity, click on Main, and then follow the above procedures for selecting another activity.

4. Choosing a Subject

The Subject Menu

At this point in the program, you are to choose an arithmetic skill (we refer to these skills as subjects). NBTF focuses on one subject at a time; an exception to this is the Mixed Operations problem sets within the Drill Activity. The following is a summary of each.

What is Covered Within Each Subject?

Addition: Within the Beginning skill level, the problems contain one-digit addends only (1 - 9). Within the Intermediate skill level, the problems contain the addition number-facts 8 - 12, or the addition of 15, 20, 25, or 50. Within the Advanced skill level, the problems consist of the addition of numbers that are multiples of 10 or 100 and contain two to four digits.

Subtraction: Within the Beginning skill level, the problems contain one-digit subtrahends only (1 - 9). Within the Intermediate skill level, the problems contain the subtraction number-facts 8 - 12, or subtraction problems containing 15, 20, 25, or 50. Within the Advanced skill level, the problems consist of the subtraction of numbers that are multiples of 10 or 100 and contain one to four digits.

Multiplication: Within the Beginning skill level, the problems contain one-digit factors only (1 - 9). Within the Intermediate skill level, the problems contain the multiplication number-facts 8 - 12, or the multiplication of 15, 20, 25, or 50 times numbers that range from 2 - 12. Within the Advanced skill level, the problems consist of squaring numbers, multiplying by powers of 10, and multiplying by two-digit numbers.

Division: Within the Beginning skill level, the problems contain one-digit divisors only (1 - 9). Within the Intermediate skill level, the problems contain the division number-facts 8 - 12, or the division of numbers by 15, 20, 25, or 50. Within the Advanced skill level, the problems consist of divisors and dividends that are powers of 10, and divisors of a range from 3 to 20, 25, or 50.

Mixed Operations: This subject appears only in the Drill Activity and consists of problems presented at random of all four of the previous basic operations.

Choosing a Subject

To select a Subject, from the Subject Menu, type the first letter of the word or click on the button of the Subject. At any time within the program, to change to another subject, click on Subject, and then from the Subject Menu, choose another subject.

5. Picking a Number-Fact or Problem-Type

Number-Facts & Problem-Types Included in *NBTF*

The Number-Facts Screen

Within the Learn and Practice activities of the Beginning and Intermediate skill levels, you are to choose a number-fact for the activity chosen. The Beginning skill level contains the number-facts of 1 -9 and the Intermediate skill level contains the number-facts of 8 - 12, 15, 20, 25, and 50. After choosing a number-fact, all problems within the activity will have at least one number that includes the number-fact chosen. The key to learning and practicing is to concentrate on the pattern of the order of each number-fact set.

The Problem-Type Screen

Within the Practice activity of the Advanced skill level, you are to choose a problem-type. Within each subject, there are 5 problem-types from which to choose. For more detailed information about each of the problem-types, see Levels 11 - 15 of each subject in Appendix B.

Picking a Number or Problem-Type

To choose a number-fact or problem-type, click on its number or name.

At any time within the Beginning or Intermediate skill levels, to change to another number-fact, click on Pick a Number. Within the Practice Activity of the Advanced skill level, to choose another problem-type, click on Pick a Set.

6. The LEARN ACTIVITY

(Learning the Basic Facts & Mental Arithmetic)

Getting to the Learn Activity

From the Main Menu, pass the cursor over Learn, then click on one of the three adjacent skill levels. Then from the Subject Menu select the desired subject by clicking its name or typing its first letter.

Choosing the Number-Fact or Problem-Type to Study

From the Number Screen, click on the number representing the number-fact you wish to learn. Note, within the Advanced activity, after choosing a subject, the program advances directly--without going through the Number or Problem-Type screen--to the Learn activity.

Overview

Within the Beginning or Intermediate skill levels, you will be presented a complete set of problems on cards of the number-fact selected. After studying its Table, you will test yourself on each card beginning on the top left and progressing to the lower right. You may view any problem's answer by placing its card within the Question Box and then flipping it to its reversed side.

The Advanced skill level presents strategies, animated examples, and narration of mental arithmetic techniques with problems containing two to five digit numbers. Navigate your way through the activity by clicking on ">" to continue to the next page, the "<" to review the previous page, or Replay to replay the current page.

Objectives

After having performed this activity, you will be able to:

- Perceive the patterns within a number-fact problem set, e.g., how changes in problems correspond to changes in answers.
- Answer problems that are difficult for you by comparing them to similar problems whose answers you know.
- Determine in which operations the numbers can be reversed and the answers remain unchanged--the mathematical Commutative Property.
- Recite the strategy in answering problems containing numbers that are powers of 10.
- Recite the strategy in answering problems containing two, three, four, and five digits using mental arithmetic.

Study Questions

The following are questions to help guide you to memorizing the number-facts within the Learn Activity. For each number-fact or problem-type that you study, try to answer each of the following:

- Can you see the pattern of how each problem and corresponding answer change from one card to the next?
- Each card's answer is how much more or less than the previous card's answer?
- Can you reverse the numbers and get the same answer?
- Can you recite the strategies necessary in performing **mental arithmetic**.

Directions

For the Beginning and Intermediate skill levels:

(Note: Do not type in the answers--use the arrow keys and mouse only)

1. Click on the *Table Button* and study all cards and their answers within the set. Try to see the basic patterns. When you think that you have memorized them all, click on any key to return to the Learn Screen.
2. Using the arrow keys on the keyboard, move the highlight from the card on the upper left, card by card and in order, to the card on the lower right.
3. For each card--as it is highlighted, it will be duplicated in the *Question Box* in the lower right hand corner of the screen; test yourself as to each card's answer.
4. If you are not sure of your answer to the card in the *Question Box*, click on the *Answer* button.
5. Repeat this procedure until you are certain of the answers of all cards in the set.

Return to the Main Menu and try the Practice Activity for this same number-fact set.

For the Advanced skill level:

1. Click on ">" to advance to the next page (note: a page is an explanation screen, problem, or example)
2. Click on "<" to return to the previous page.
3. Click on Replay to start at the beginning of the current page.

Note: If you wish to quickly advance through the pages, click on the eraser icon.

Hints

Repetition facilitates learning. Within the Beginning and Intermediate skill levels, for problems that you have a hard time memorizing, select the problem often and repeatedly flip its card to view its answer. Within the Advanced skill level, use the "<" and Replay buttons to repeatedly review strategies, steps, and examples. Take your time. Relax. Have Fun!

7. The PRACTICE ACTIVITY

(Reinforcing What You've Learned)

Getting to the Practice Activity

From the Main Menu, pass the cursor over Practice, then click on one of the three adjacent skill levels. Then from the Subject Menu select the desired subject by clicking its name or typing its first letter.

Choosing the Number-Fact or Problem-Type to Study

Within the Beginning and Intermediate skill levels, from the Number Screen, click on the number of the number-fact you wish to learn. Within the Advanced skill level, from the Problem-Type Screen, click on the name of the problem-type you wish to practice.

Overview

There are two main areas of the Practice Screen--for the Beginning and Intermediate levels, they are called the Unmastered and the Mastered areas; for the Advanced level they are called the Unsolved and Solved areas. The Practice Activity begins with all cards of the number-fact or problem-type that has been selected located in the Unmastered Area or Unsolved area on the left. Problems are then presented at random for answering. Those answered correctly are placed in the Mastered or Solved area on the right, those answered incorrectly are returned to the left to be randomly selected again. There are no time limits; however, a total time is provided upon concluding the activity

Objectives

After having performed this activity, you will be able to:

- Answer correctly all problems within a number-fact set.
- Answer correctly problems containing numbers that are powers of "10."
- Answer correctly problems containing two, three, four, and five digits using mental arithmetic
- Learn the correct answers to problems previously answered incorrectly.

Study Questions

The following are questions to help guide you while working within the Practice Activity. For each number-fact or problem-type, try to answer each of the following:

- If you do not know the answer to a problem presented to you, how can you use the pattern of the number-fact set to help you find the answer?
- How quickly can you complete the activity by getting all the cards to the Mastered or Solved area?
- In the Advanced skill level, how do the number of zeros at the end of a number assist in determining the answer?
- In performing mental arithmetic, what are the strategies for each problem-type?

Directions

1. Using the number keys from the keyboard, type in the answer to the problem presented--if you make a mistake, use the backspace key.
2. If you do not know the answer (for the Beginning & Intermediate levels), type **T** to view a table of the entire number-fact set with answers.
3. Press <ENTER>. Note: If you are correct, the card advances to the right, and you will be presented with the next problem. If you are wrong, the card stays on the left. You will then be shown the correct answer. Press <ENTER> again.
4. Work as quickly as you can; when all the cards have been transferred to the right, the program will inform you of your total elapsed time.

Hints

- Think about the patterns of the number-fact selected when answering problems.
- When you have difficulty answering a problem, think about how much more or less its answer should be from a similar problem whose answer you do know.
- When you get completely stuck, type **T** to see a table of the complete number-fact set with answers. Remember that the purpose of NBTF is make you powerful in working problems mentally.
- Don't be afraid to make mistakes. When you do error, do your best to memorize the correct answer, and when it is presented to you again, to answer it correctly. This is how you learn!

8. The DRILL ACTIVITY

(Drilling for Mastery)

Getting to the *Drill Activity*

From the Main Menu, pass the cursor over Drill, then click on one of the three adjacent skill levels. Then from the Subject Menu select the desired subject by clicking its name or typing its first letter.

Overview

You will be presented a timed problem set of ten problems. If you answer all ten correctly within the time limit, you will be able to progress to the next level. If you do not, you will be shown which problems you missed, and for each, your response and the correct answer. There are five levels and each level is more difficult than the previous. Upon mastering the fifth and final level, you will be rewarded with the printing of a NOTHIN' BUT THE FACTS Mastery Certificate in your honor.

Objective

After completing this activity, you will have demonstrated mastery for that subject and skill level by answering all problems correctly within the time limits for all five levels.

Study Questions

The following are questions to help motivate you while working within the Drill Activity.

- Does performing problems quickly make you feel more confident?
- Since it is not important how many times you attempt a problem set, can you see how you gain competency by trying over and over again?

Directions

1. Note your skill at the top of the screen.
 Beginning: You are to master levels 1 - 5
 Intermediate: You are to master levels 6 - 10
 Advanced: You are to master levels 11 -15
2. Note your time limit and the instructions. You must answer all 10 problems correctly within the time limit.
3. When you are ready, press <ENTER>.
4. As you are presented problems, type in the answers as quickly as possible. If you make a mistake, use the backspace key.
5. Press <ENTER> and the next problem will appear. In this activity, you will not be provided feedback until you have finished working all 10 problems of the set.
6. If you worked all 10 correctly within the time limit, press Continue to advance to the next level.
7. If you did not work all ten correctly within the time limit, you will be presented a report. Make note of the information in the report and then press Continue when you are ready to rework a similar problem set within the present level.
8. See how many levels you can master. If you master all five levels of your skill, you may have printed a Certificate of Mastery.

Hints

- Use the number keypad for quicker answering.
- Solve each problem from left to right.
- Work as quickly as possible.
- If you do not answer all of the problems correctly or if you go over the time limit, or both, make note of the problems missed, and then keep working problem sets within that level.
- Don't give up! Reward yourself for any kind of improvement and for trying.

Note: Descriptions of the problem-set levels are provided in Appendix B.

To Print a Certificate of Mastery

When you have mastered the fifth and last level, a dialogue box will appear asking if you wish to have a certificate printed (Please Note: you must have an HP compatible printer); click on Yes. A print dialogue box will appear verifying the type of printer and asking number of copies to print.

Leaving the Drill Activity

- To reach mastery of all five levels (problem sets) of each skill level and subject, you must work continuously. If you choose to leave the Drill Activity, the program will not mark your spot; if return, you will have to begin at the first level for that skill and subject.
- Please Note: For every problem attempted within any activity of NBTF, a report is generated within the Progress Reports function of this program.
- When you have completed the Drill Activity, click on Main or Subject to select another activity or subject.

9. Reporting

Reporting User Progress

As each user works within the program, NBTF is recording the activity in its data base. The data base is equipped to handle ten users at a time. Therefore, on the Sign-In screen, only ten user names can be accommodated. For each user, the data is kept for an unlimited period of time. Please note that when a user's name is deleted from the Sign-In screen, all data for that user is erased.

Viewing Progress Reports

To view any user's progress report, from the Sign-In screen, click on the user's name. From the Main Menu, click on Reports (at the bottom). If the user did not work in the program that day, it will indicate that there is nothing to report. Click on the Calendar to select a report. The days in which the user used the program are in red. To change to a previous month, click the left arrow at the top of the calendar; to change to the following month, click the right arrow at the top of the calendar. To view a user's report for any day for which he/she worked, click on that day on the calendar (in red).

Printing Reports

To print any report, click on Print at the bottom of the screen. To return to the program, click on Return.

Using the Reports

Depending upon the learning situation, the reports can be used in a variety of ways. It is suggested that a user be given directions or assignments as to which parts of the program should be worked. For example, the user should begin by spending time reviewing skills in which s/he is proficient to reinforce competency. This can be done by choosing a number-fact, reviewing it in the Learn activity, and then seeing how quickly the user can answer correctly all problems of that number-fact within the Practice activity. This should be repeated with other number-facts or problem-types recently mastered. Next, s/he should concentrate on number-facts or problem-types not yet mastered and again should progress from Learn to Practice. Once an entire subject has been mastered, then s/he should select the Drill activity for that subject and skill level.

From a Weekly Report, track the user's progress in both % correct and time. From the reports, give him/her directions on activities and problem-types to be worked in future sessions. From printed reports, circle in pen number-facts or problem-types in which the user excelled and others in which further work is needed.

10. Printing Worksheets

Worksheets Contained in *NBTF*

NBTF provides for the printing of over seventy-five types of problem sets each of which contains forty problems. These sets are **randomly generated** so that no two should be the same. You may print as many copies as you wish. With each printing, an Answer Key is included. This feature enables you to take your work with you when a computer is unavailable. Also in situations where there are more users than computers, after one user works with the program for a certain period of time, problem sets can be printed of the type in which additional work is needed. The user can then be working with the printed problems while the next user takes his/her turn at the computer.

Printing Worksheets

From the Main Menu, click on Worksheets. You will then see a dialogue box that asks you to select a subject and level to be printed. (see Appendix B for a listing of the problem-types of each subject and level.) The Mixed problem sets contain randomly generated problems from each subject within that level.

To print, first click on the circle preceding the subject and, next, the circle preceding the level. Then click Continue (at the bottom of the screen) and a second dialogue box will appear that will ask you to select the number of copies wanted. One copy of the Answer Key is always included with any quantity of problem sets printed. To return to the Main Menu, click Main.

11. Finishing Up

Finding Out How Well You Performed

The Summary Screen: At the conclusion of the Practice Activity, and after each problem set in the Drill Activity, a Summary screen appears that indicates the time taken and the number of problems worked correctly.

Progress Reports: To view a report of your activity for any session, from the Main Menu, click on Report. If you are in the midst of a session, the report will not be complete. To complete a session, you must click on Exit from the Main Menu. Upon exiting, the NBTF data base summarizes your work and generates a completed session report. Before the program exits, a dialogue box appears that will ask if you wish to print a report (see Exiting the Program below).

Certificate of Mastery: After mastering all problem sets within the Drill Activity, you are rewarded with a Certificate of Mastery. To print the certificate, choose Yes from the dialogue box asking you whether you wish to print a certificate. It will show a second Print dialogue box where you may change the type of printer listed and select the number of copies in which you wish to print. After following directions, a certificate will be produced.

Exiting the Program

From the Main Menu, click on Exit at the bottom right-hand corner of the screen, or at any place within the program, press <Esc>.

Appendix A: The Quick Tours

The following are four tours that when followed will provide a quick glimpse at the main activities of this program. To take a tour:

- **Tour One: (To the Beginning Learn Activity)**
- **Tour Two: (To the Advanced Learn Activity)**
- **Tour Three: (To the Intermediate Practice Activity)**
- **Tour Four: (To the Beginning Drill Activity)**

Step 1: Once you reach the Sign-In Screen, click on <New>. Type in your name (up to ten letters but no periods), then press <Enter>.

Step 2: From the Main Menu, click on Sound in the bottom left corner. Within the Sound dialogue box, click on “?” for directions about turning on selected sound options.

Step 3: Choose one of the tours and follow the directions under the column heading What To Do?

· **Tour One (To the Beginning Learn Activity)**

Stop	What To Do?
1. The Main Menu Screen	Pass the Mouse over the Learn button (For Tour One, we'll choose Learn). Next click on the speaker-icon to the right of Beginning; for Tour One, we'll choose Beginning. After hearing its overview, click on the word--Beginning
2. The Subject Menu Screen	Click on the Subject or type the first letter of the subject: <u>A</u> ddition, <u>S</u> ubtraction, <u>M</u> ultiplication, <u>D</u> ivision. (For Tour One, we'll choose Multiplication)
3. The Number-Facts Screen	Click on the number of the number-fact you wish to study and learn. (For Tour One, we'll choose 6).
4. The Learn Activity Screen	1. Click on Table to study the complete table of additions of 6. 2. Click on any card at the top to display it in the Question Box. (It is suggested that you display the cards in order from upper left to lower right by using the arrow keys. In this way you'll see the patterns of each number-fact.) 3. Click on Answer to flip any of the cards that you have displayed in the Question Box. Continue until all cards are memorized, then click on: Subject, Pick a Number, or Main. (To return for the next tour, we'll choose Main).
5. The Main Menu Screen	For Tour One, this will END OUR TOUR. Thank-you, & now we recommend Tour Two!

- **Tour Two (To the Advanced Learn Activity)**

Stop	What To Do?
1. The Main Menu Screen	Pass the Mouse over the Learn button (For Tour Two, we'll choose Learn). Next click on the speaker-icon to the right of Advanced; for Tour Two, we'll choose Advanced. Don't worry, you'll just watch and click; you do not have to do any problems. After hearing its introduction, click on the word--Advanced.
2. The Subject Menu Screen	Click on the Subject or type the first letter of the subject: <u>A</u> ddition, <u>S</u> ubtraction, <u>M</u> ultiplication, <u>D</u> ivision. (For Tour Two, we'll choose Addition)
3. The Learn Activity Screen	Click on the ">" when you are ready to advance to the next page. Just watch and learn--the presentation should not take any longer than 5 minutes. (Note: Many math instructors are teaching left to right arithmetic to augment traditional right to left methods to allow students to more accurately estimate answers--to be in the ballpark.). Once you have finished the Recap, then click on: Subject, or Main. (To return for the next tour, we'll choose Main)
6. The Main Menu Screen	For Tour Two, this will END OUR TOUR. Thank-you, & now we recommend Tour Three!

• **Tour Three (To the Intermediate Practice Activity)**

Stop	What To Do?
1. The Main Menu Screen	1. Pass the Mouse over the Practice button (For Tour Three, we'll choose Practice). 2. Next click on the speaker-icon to the right of Intermediate; for Tour Three, we'll choose Intermediate. 3. After hearing its introduction, click on the word--Intermediate.
2. The Subject Menu Screen	Click on the Subject or type the first letter of the subject: <u>A</u> ddition, <u>S</u> ubtraction, <u>M</u> ultiplication, <u>D</u> ivision. (For Tour Three, we'll choose Division)
3. The Number Screen	Click on the number of the number-fact you wish to study and learn. (For Tour Three, we'll choose 11)
4. The Practice Activity Screen	If you wish complete Practice directions, objectives, and hints, click on "?". 1. Type in the answer to the card displayed, then type <Enter>. If you were correct, you will be presented with the next problem. 2. If wrong, you will be given the correct answer and must type <Enter> again. (Note: the last card either is placed in the Mastered Area or is returned to the Unmastered Area. 3. Continue answering cards until all cards are in the Mastered Area (it will give you a report) <u>or</u> click on: Subject, Pick a Number or Main. (we'll choose Main)
5. The Main Menu Screen	Click on Report to take a quick glimpse at NBTF's reporting mechanism.
6. The Reports Screen	1. Note how NBTF keeps track of your log-in time, what activity, subject, and number-fact in which you worked. In addition it lists the number of problems attempted and answered correctly, their percent, and time on task. When you log-out, it will also note that time and the total session time. 2. Click on Return
7. The Main Menu Screen	(For Tour Three this will END OUR TOUR Thank-you & we recommend Tour Four!

- **Tour Four (To the Drill Activity)**

Stop	What To Do?
<p>1. The Main Menu Screen</p>	<ol style="list-style-type: none"> 1. Pass the Mouse over the Drill button (For Tour Four, we'll choose Drill). 2. Next click on the speaker-icon to the right of all the skill levels. 3. After hearing its introduction, click on the word--Beginning.
<p>2. The Subject Menu Screen</p>	<p>Click on the Subject or type the first letter of the subject: <u>A</u>ddition, <u>S</u>ubtraction, <u>M</u>ultiplication, <u>D</u>ivision, or <u>MiX</u>ed (For Tour Four, we'll choose Mixed)</p>
<p>3. The Drill Activity Screen</p>	<p>If you wish complete Drill instructions, objectives, and hints, click "?".</p> <ol style="list-style-type: none"> 1. Note that you have to work 10 problems correctly within a certain time limit. 2. Type <Enter> when you are ready!
<p>4. The Drill Problem Screen</p>	<p>Type in the answer to the problem presented as quickly as possible; then type <Enter>.</p> <p>Continue answering problems until you have answered 10. NBTF will automatically take you to the next screen.</p>
<p>5. The Drill Problem Set Summary Screen</p>	<p>Note the number of problems answered correctly and the your performance time. If you answered them all correctly within the allotted time, you may click on Continue and advance to Level 2 (there are five levels within each skill). If you missed any and/or if you took more than the allotted time, note the reporting of your performance as well as a listing of any problems missed including your answer and the correct answer. When you are ready to leave, click on Subject Menu, Continue, or Main Menu. We'll click on Main Menu.</p>
<p>6. The Main Menu Screen</p>	<p>For Tour Four, this will END OUR TOUR Thank you and Good Luck with NOTHIN' BUT THE FACTS!!</p>

Appendix B: Printing a Problem Set & Drill Activity Descriptions

Before printing a problem set with answer key, determine the level from the following: In the Drill Activity, the Beginning skill level constitutes Levels (column on left) 1 - 5; Intermediate-- Levels 6 - 10; and Advanced-- Levels 11 - 15.

Level	ADDITION	SUBTRACTION
1	TOP ADDEND: (range: 0 - 9) BOTTOM ADDEND: (range: 0 - 3) (and the reverse)	MINUEND: (range: 12 - 0) SUBTRAHEND: (range: 0 -3, & less than the minuend)
2	TOP ADDEND: (range: 2 - 9) BOTTOM ADDEND: (range: 3 - 6) (and the reverse)	MINUEND: (range: 15 - 3) SUBTRAHEND: (range: 3-6, & less than the minuend)
3	TOP ADDEND: (range: 2 - 9) BOTTOM ADDEND: (range: 6 - 8) (and the reverse)	MINUEND: (range: 17 - 6) SUBTRAHEND: (range: 6-8, & less than the minuend)
4	TOP ADDEND: (range: 2 - 9) BOTTOM ADDEND: (range: 7 - 9) (and the reverse)	MINUEND: (range: 18- 7) SUBTRAHEND: (range: 7-9, & less than the minuend)
5	TOP ADDEND: (range: 3 - 9) BOTTOM ADDEND: (range: 3 - 9)	MINUEND: (range: 18 - 7) SUBTRAHEND: (range: 3 - 9 & less than the minuend)
6	TOP ADDEND: (range: 2 - 13) BOTTOM ADDEND: (range: 9 - 12) (and the reverse)	MINUEND: (range: 15 - 27) SUBTRAHEND: (range: 10- 12 & less than the minuend)
7	TOP ADDEND: (range: 8 - 12) BOTTOM ADDEND: (range: 8 - 19) (and the reverse)	MINUEND: (15, 20, or 25) SUBTRAHEND: (range: 6 - 22 & less than the minuend)
8	TOP ADDEND: (15, 20, 25, or 50) BOTTOM ADDEND: (range: 8 - 19) (and the reverse)	MINUEND: (25 or 50) SUBTRAHEND: (range: 11 - 39 & less than the minuend)
9	TOP ADDEND: (5 X [range: 4 - 15]) BOTTOM ADDEND: (15, 20, 25, or 50) (and the reverse)	MINUEND: (5 X [range:4-19]) SUBTRAHEND: (15, 20, 25, OR 50 & less than the minuend)
10	TOP ADDEND: (5 X [range:1 - 15]) BOTTOM ADDEND: (15, 20, 25, or 50) (and the reverse)	MINUEND: (5 X [range:4 - 19]) SUBTRAHEND: (range: 8 - 12 & less than the minuend)
11	TOP ADDEND: (range: 10-99) BOTTOM ADDEND: (15, 20,25, or 50) (and the reverse)	MINUEND: (range: 20 - 99) SUBTRAHEND: (range: 4 - 12 & less than the minuend)
12	TOP ADDEND: (range: 10 - 99) BOTTOM ADDEND:(range: [10 or 100] X [4-12]) (and the reverse)	MINUEND: (range: 21- 99) SUBTRAHEND: (range: 13 - 79 & less than minuend)
13	TOP ADDEND: (range: 13 - 99) BOTTOM ADDEND: (range: 13 - 99)	MINUEND: (range: 101 - 999) SUBTRAHEND: ([10] X [range: 11-99] & less than minuend)
14	TOP ADDEND: (range: 101 - 999) BOTTOM ADDEND: (range: 101 - 999)	MINUEND: (range: 101-999) SUBTRAHEND: (range: 101-999 & less than minuend)
15	TOP ADDEND: (range: 1001 - 9999) BOTTOM ADDEND: (range: 1001 - 9999)	MINUEND: (range: 1001-9999) SUBTRAHEND: (range: 1001-9999 & less than minuend)

Level	MULTIPLICATION	DIVISION
1	TOP FACTOR: (range: 0 - 9) BOTTOM FACTOR: (range: 0 - 3) (and the reverse)	DIVIDEND: (divisible by divisor of: 1 - 3 & < or equal to 27) DIVISOR: (range: 1 - 3)
2	TOP FACTOR: (range: 3 - 9) BOTTOM FACTOR: (range: 3 - 5) (and the reverse)	DIVIDEND: (divisible by divisor of: 3 - 5 & < or equal to 45) DIVISOR: (range: 4 - 5)
3	TOP FACTOR(from 3-91) BOTTOM FACTOR: (range: 5 - 7) (and the reverse)	DIVIDEND: (divisible by divisor & < or equal to 63) DIVISOR: (range: 5 - 7)
4	TOP FACTOR: (range: 3 - 9) BOTTOM FACTOR: (range: 7 - 9) (and the reverse)	DIVIDEND: (divisible by divisor & < or equal to 81) DIVISOR: (range: 7 - 9)
5	TOP FACTOR: (range: 4 - 9) BOTTOM FACTOR: (range: 3 - 9)	DIVIDEND: (divisible by divisor & < or equal to 81) DIVISOR: (range: 3 - 9)
6	TOP FACTOR: (range: 2 - 9) BOTTOM FACTOR: (range: 10 - 12) (and the reverse)	DIVIDEND: (divisible by divisor & range 20 - 144) DIVISOR:(range 10-12)
7	TOP FACTOR: (10, 20 or 50) BOTTOM FACTOR: (range: 2 - 10) (and the reverse)	DIVIDEND: (divisible by divisor & range 24 - 225) DIVISOR:(12, 15, or 25)
8	TOP FACTOR: (12, 15, or 25) BOTTOM FACTOR: (range: 2 - 10) (and the reverse)	DIVIDEND: (divisible by divisor & range 20 - 450) DIVISOR:(10, 20, or 50)
9	TOP FACTOR: (10, 20 or 50) BOTTOM FACTOR: (range: 4 - 12) (and the reverse)	DIVIDEND: (divisible by divisor & range 80 - 600) DIVISOR:(range 10, 20, or 50)
10	TOP FACTOR: (11, 12, 15, or 25) BOTTOM FACTOR: (range: 6 - 12) (and the reverse)	DIVIDEND: (divisible by divisor & range 88 - 300) DIVISOR:(range 11, 12, 15 or 25)
11	SQUARES TOP FACTOR: (range: 1 - 16) & (range: 5 X [4 - 15]) BOTTOM FACTOR: (same as the top factor)	DIVIDEND: (divisible by divisor & [10 or 100]X[range: 2-12]) DIVISOR: (range 3 - 9)
12	TOP FACTOR: ([10 or 100] X [range: 2- 12]) BOTTOM FACTOR: (range: 2 - 12)	DIVIDEND: (divisible by divisor & [10 or 100] X [range: 2-12]) DIVISOR: (range 10, 11, or 12)
13	TOP FACTOR: ([10, 100 or 1000] X [range: 2- 12]) BOTTOM FACTOR: (15, 20, 25, or 50)	DIVIDEND: (divisible by divisor & [10, 100, or 1000] X [range: 2-12]) DIVISOR: [10, 100, or 1000] X [range: 2-12]
14	TOP FACTOR: (range: 13-49) BOTTOM FACTOR: (range: 3-9)	DIVIDEND: (divisible by divisor & [range: 1000 - 10,000]) DIVISOR: (range 20, 25, or 50)
15	TOP FACTOR: ([2] X [range: 6-49]) BOTTOM FACTOR (15, 25, 50)	DIVIDEND: (divisible by divisor & [range: 26-228]) DIVISOR: (range: 13 - 19)

Appendix C: Interface Commands

Mouse Command	Keyboard Command	Meaning
Click on “?”	F1	Help: Assistance and directions. User Guide available on-screen.
Click on Report	F2	Reports Screen: Availability of history of progress reports for all sessions since user initially signed in.
Click on Main button	F3	Main Menu: Proceed to the screen where you may choose an activity and skill level
Click on Subject button	F4	Subject Menu: Proceed to the screen where you may choose Addition, Subtraction, Multiplication, Division, & Mixed Numbers
Click on Worksheets button	F5	Print a Problem Set: Proceed to a dialogue box where you may select from 15 levels of randomly generated problem sets for each subject.
Click on Pick a Number or Pick a Set button	F6	Another Number: Proceed to the Number or Problem Type Screen.
Click on Options button	F8	Options: To turn on or off spoken problems, spoken tutorials, spoken buttons, or sound effects, etc.
(no mouse command available)	F9	Version: Provides information of this version of NOTHIN' BUT THE FACTS
Click on Table button	T	Table: Displays complete set of cards with all problems and answers.
Click on Answer button	A	Answer: In the Learn Activity, “flips” the card in the Question Box to display the answer.
Click on desired card	Arrow Keys & pressing <Enter>.	In the Learn Activity, the arrow keys will move the highlight from one card to another (left, right, up, or down)
Mouse Command	Keyboard Command	Meaning
Click on More	M	More Problems: In the Advanced Practice Activity, to produce another set of randomly generated problems.
Click on Continue	Pressing <Enter>.	Continue: In the Drill Activity, to proceed to the next problem set of 10.

Click on Addition	A	To choose Addition on the Subject Menu
Click on Subtraction	S	To choose Subtraction on the Subject Menu
Click on Multiplication	M	To choose Multiplication on the Subject Menu
Click on Division	D	To choose Division on the Subject Menu
Click on Mixed	X	To choose Mixed Operations on the Subject Menu

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