

T H E  
H A N D B O O K  
F O R

**MATHTALK™**

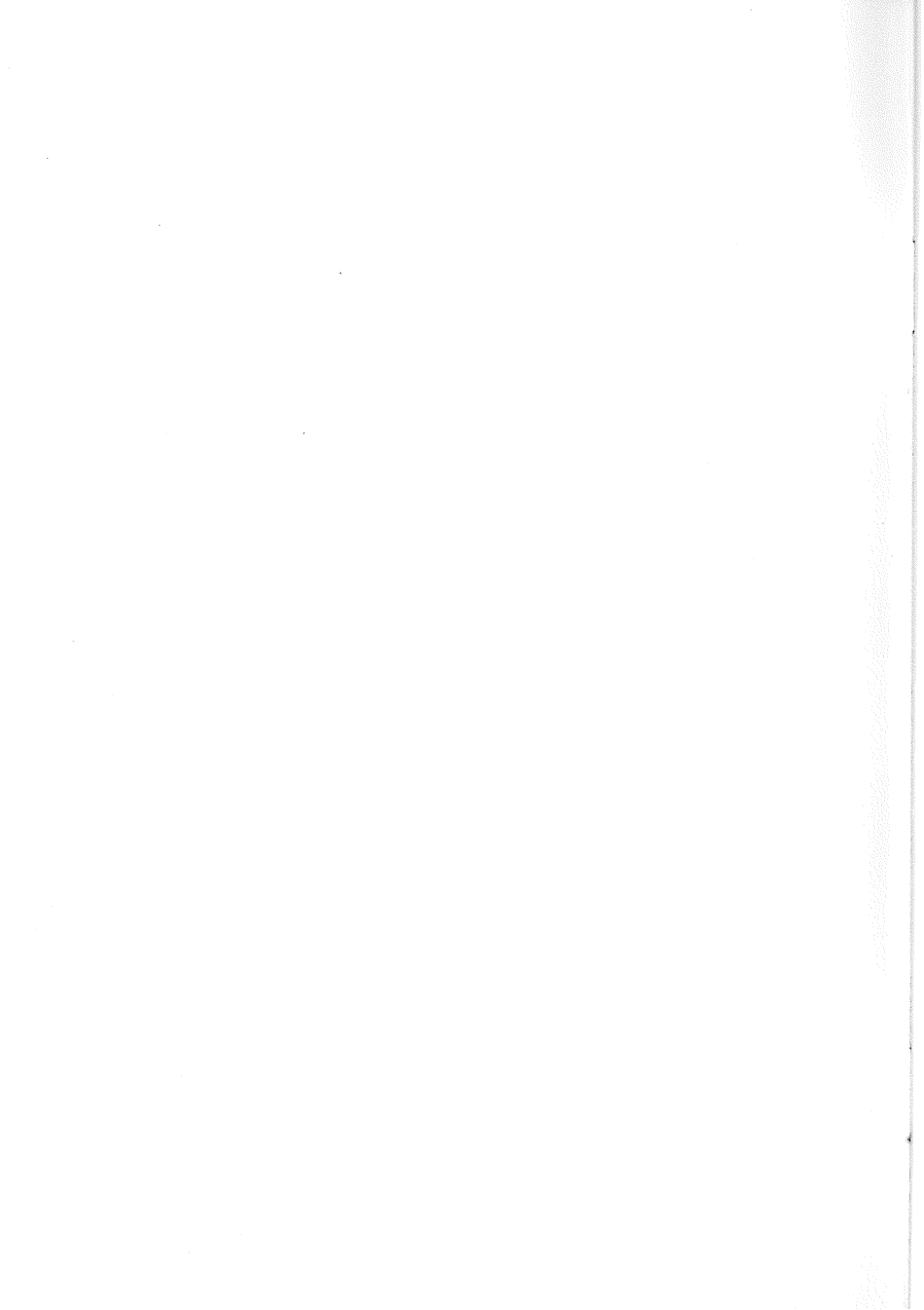
*One of the Talking Notebook™ Series.*

*A Powerful Learning Tool  
for Mathematics Mastery*



**First Byte®**

THE WORLD'S LEADER IN SOFTWARE SPEECH TECHNOLOGY.



**MATHTALK™**  
H A N D B O O K

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First Byte, Inc.  
2845 Temple Avenue  
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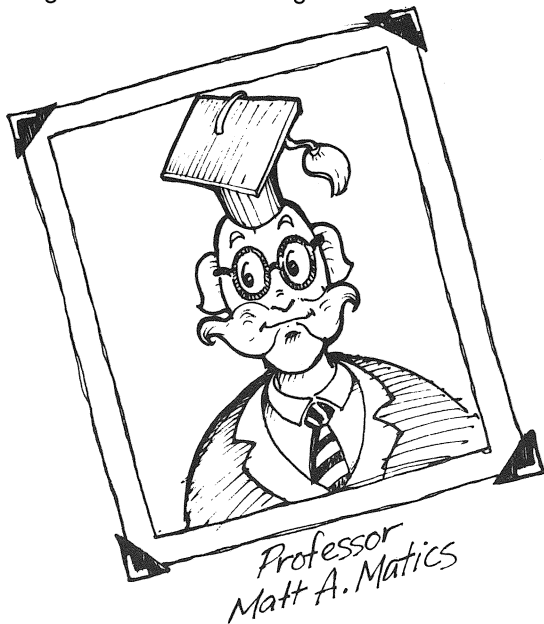
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Written inquiries concerning this Agreement may be directed to First Byte, Attention: President at 2845 Temple Avenue, Long Beach, CA 90806.

# USER'S GUIDE

## WELCOME TO *MATHTALK!*

Have you ever wished for your own private tutor who could help you with your math assignments any time you asked? Congratulations! You have just had a dream come true. **MathTalk** brings you **Professor Matt A. Matics**, a very smart, talking computer friend who can help you complete your math assignments. He won't do the work for you, but will show you how to do it yourself. With his expert help you will quickly and easily learn how to do many different kinds of Addition, Subtraction, Multiplication, and Division problems. He's there when you need his help, he never gets tired, and he's been taught not to yell. Sound good? Here's how to get started!





## GETTING STARTED

1. If this is the first time you have used **MathTalk**, select **First Time User** on the Introduction screen. You will be asked to enter your name to start a **Score File**.
2. Enter your own math problems and make a Math Page in **Math Book**. You can make Addition Pages, Subtraction Pages, Multiplication Pages, or Division Pages.
4. **Print** out your Math Page.
5. Get help from **Professor Matt A. Matics** in **Solve It** as you are working out each problem. Put your answers on the printed page.
6. Prepare for the math quiz at school by making a Math Page of practice or test problems. Use **Scoreboard** to see how well you know how to do these problems. If you need help, you can select the **Professor's Chalkboard** or **Incredible Talking Calculator**.
7. To become a whiz in the basic math facts for Addition, Subtraction, Multiplication, or Division, enter the **Game Room** and play **Table Talk** or **Mystery Number**.

## USING THE MAIN MENU

**MathTalk** is full of choices you can make. The Main Menu presents many different selections that will assist you in tackling math problems and learning math facts. A picture is included in each box to help you remember what choice you are making and let you open a **Picture Box Menu**.

### THE **(S)** MENU

Select the **(S)** Menu and you will be able to change speech volume. In addition, if you choose to turn the speech **Off**, **Professor Matt A. Matics** will not speak most of the instructions that appear on the screen.



## ***MATH BOOK MENU***

The **Math Book Menu** helps you make Math Pages. You can make an Addition, Subtraction, Multiplication, or Division Page. Each Page can have as many as 24 problems.

**NEW** opens an empty Math Page where you can enter your problems. **MathTalk** will not accept fractions or decimal problems. If you enter a number that is too large, **Professor Matt A. Matics** will tell you to try another number.

**OPEN** lets you select a Math Page that you have already made that is stored on your disk. Once a Math Page is **Open**, you can select a problem and change it if necessary.

**CLOSE** puts away the Math Page that is on the screen.

**SAVE** stores the Math Page that is on the screen and keeps it in your **Math Book**.

**PRINT** lets you make a paper copy of your Math Page if you have a printer.

## ***THE WHIZ MENU***

Become a Math **Whiz!** Open a Math Page and let **Professor Matt A. Matics** help you solve each problem. His spoken instructions, pictures, and demonstrations will help you through any difficulties. Test yourself and see how well you have mastered each Math Page.

**SOLVE IT:** You will see each problem on the Math Page you select. If you have difficulty solving any problem, **Professor Matt A. Matics** will help you understand what went wrong. With his help you'll be able to find the answer to each problem and learn from your mistakes. As you answer each problem correctly, put the answer on your printed paper copy. If this page was assigned at school, it's ready to give to your teacher.

**SCOREBOARD:** If you have to study for a math quiz at school, or if you want to see how well you understand your work, use **Scoreboard** to take a practice test. Select a Math Page and let **Professor Matt A. Matics** give you the problems to solve. At the end of the quiz, you will receive a score which can be saved to help you keep track of your progress. To correct the problems you answered incorrectly, use either the **Professor's Chalkboard** or **Incredible Talking Calculator**.

## ***THE GAME ROOM MENU***

Enter the **Game Room** and test your skill with Addition, Subtraction, Multiplication, and Division facts. If you choose, play against the clock and conquer each problem quickly and easily.

**TABLE TALK:** In this game you will find four math tables to tackle, Addition, Subtraction, Multiplication, and Division. Choose a table and solve problems to fill in the table's squares. How long will it take you to finish a table? How many tries? Your scores will be saved so you can see how much you improve.

**MYSTERY NUMBER:** It's easy to solve a problem when all the numbers are there to see. It's harder to find a solution when numbers are missing. Play **Mystery Number** and find the missing numbers to solve the problem. Choose the type of problems you want and guess how much time it will take you. When the game is over, you'll see your score. Your scores will be saved so you can see how much you've improved.

## **THE SCORES MENU**

The **Scores Menu** allows you to set up a **Score File** that will save your scores from **Scoreboard**, **Table Talk**, and **Mystery Number**. You can start a **Score File** by selecting **New**. **View** lets you open a **Score File** and look at your scores. Use **Open** to tell the Professor which **Score File** should be active. This is where he will save the scores until you **Open** another **Score File**.

## **QUIT**

Use the **Quit** Selection to leave **MathTalk**. Make sure you save new Math Pages before quitting.



# PARENTS AND HELPERS

## INTRODUCTION

Congratulations! You now have a private math tutor, **Professor Matt A. Matics** in your home to help your children complete their math assignments, receive individualized help in Addition, Subtraction, Multiplication, and Division skills, and prepare for math tests at school. **MathTalk** is an exciting addition to **First Byte's® Talking Notebook™ Series**.

The use of high quality software-only-speech and graphics allows **MathTalk** to provide your child with an illustrated tutorial for each math problem entered. This is the first time in math software has been able to give the learner this degree of individualized assistance.

Each child can work independently, progressing at their own rate, making their own decisions. Through the tutorials, test simulations, and games the learner builds a solid base of understanding of math facts and basic operations while having fun with the Professor. The math confidence they will acquire will transfer to improved performance in the classroom.

## MATHTALK FEATURES

With **MathTalk** your child will be able to . . .

1. Enter their math problems from school and print out a paper copy to turn in for a homework assignment.
2. Receive individualized help if they have difficulty solving a problem.
3. Practice the basic math facts in Addition, Subtraction, Multiplication, and Division to acquire mastery.
4. Check their work using a computer simulated calculator.
5. Practice completing math problems in a simulated test situation.



## LEARNING OBJECTIVES

By using **MathTalk** your child will be able to . . .

1. Master the basic math facts of Addition, Subtraction, Multiplication, and Division.
2. Develop thinking strategies for math problems and operations that they are having difficulty mastering.
3. Use a calculator to perform math functions both on and off the computer.
4. Complete basic math facts tables.
5. Supply the missing number in a basic math fact problem.

## HELPING YOUR CHILD GET STARTED

The following sequence of **MathTalk** activities is suggested.

1. If this is the first time your child has used **MathTalk** select **First Time User** on the Introduction screen. In order to set up a **Score File** to chart progress, your child will be asked to enter a name. Scores will be saved from **Table Talk**, **Mystery Number**, and **Scoreboard**.
2. Enter a Math Page of problems using **New** in the **Math Book Menu**. If the problems are to be turned in at school, print out the problems when the Math Page is finished.
3. Use **Solve It** in the **Whiz Menu** to work through each problem until your child answers the problem correctly. If a paper copy is to be turned in at school, your child can write the answers on the paper copy of the Math Page as each problem is solved.

4. Use **Scoreboard** in the **Whiz Menu** to solve the Math Page problems in a test simulation. Your child can correct the problems that are incorrect with the help of the **Incredible Talking Calculator** or **Professor's Chalkboard**.
5. Encourage your child to become a master of Addition, Subtraction, Multiplication, and Division facts by playing **Table Talk** or **Mystery Number** in the **Game Room**.



## EDUCATIONAL CONSIDERATIONS

The purpose of *MathTalk* is to help a child master the building blocks, the major arithmetic operations, and facts. In addition, it will help develop strategies for handling problems that are difficult to solve, and provide preparation for tests of mastery that occur in the school setting.

Without a conceptual understanding, as well as speed and accuracy in the basic facts, a child will have difficulty applying mathematical operations in practical applications. These Addition, Subtraction, Multiplication, and Division facts are building blocks that serve as an important foundation for the development of more complex math skills. Likewise, this conceptual foundation should be laid to ensure that tools like calculators are used with understanding and skill.

It is important that as a helper you provide extra activities that reinforce and build on your child's grasp of these basic facts. The following suggestions will provide problem solving situations that will lead to an increased understanding and higher level thinking skills.

## EXTRA ACTIVITIES

- It is important in the learning process for a child to manipulate physical objects as well as symbolic objects like numbers. Introduce physical learning tools such as blocks, an abacus, and other counting toys. Count objects and make groups that can be added or subtracted.
- Get a number of similar objects together, like bottle caps, and encourage your child to group them and make number combinations. Have her write down a number sentence that fits the groupings she has made. For example, if she makes a group of 4 and a group of 6, the number sentence could be  $4 + 6 = 10$ . Part of the creative process is creating order out of disorder.
- Challenge your child to see how many ways he can express one problem. Example  $6 + 7 = 13$  could also be expressed as . . .  $(3+3)+(3+4) = 13$  or  $(2+2+2)+(3+2+2) = 13$ .

- Make up word problems about objects, events, or people around the house that illustrate the use of a basic math fact. For example, "You had 15 marbles in your marble bag in your drawer. You took them out on the patio and played a marble game until your dog Jasper ran through your game and scattered marbles everywhere. When you picked up the marbles and counted them again you had 8 marbles. How many do you have left to find?"
- Expand on the **Mystery Number Game** and open up additional learning possibilities by hiding the identity of more numbers. For example,  **$? + ? = 18$  or  $5 ? 5 = 25$  or  $? \times 2 + 5 - 1 = 8$ .**
- Playing card games or board games with dice that require quick computations provide skill building, entertaining practice.
- Provide a calculator for your child to use. It is important to stress that these machines don't take the place of understanding how to work with numbers, but they can be a great tool for quick computation and checking problems.

- Here are two more calculator games to try with more than one player.

**Chase:** Using two calculators, which player can solve a certain number of problems the fastest without error.

**Hit the Target:** Set a number as the desired or "target" total. Who can complete a series of number calculations that will reach the target number first?

- Encourage your child to think of shortcuts to solving math problems. Sometimes children absorb the mechanical operations so thoroughly that they become blind to better, quicker strategies. For example, if you asked  $9 + 8 = ?$  they might say . . .

"Nine and one makes 10, and 10 plus seven is 17."

"Eight and eight, I know is 16, and one more is 17."

"Eight and 10 are 18, and 18 take away one is 17."

"Eight and two are 10 and seven more makes 17."

- Encourage your child to be an estimator. Estimation skills are important in quick problem solving and can be very helpful in finding common sense solutions to problems. After assuring your child that you are not looking for the exact answer, pose some problems that build on their math skills but stretch their abilities. For example, if they have mastered adding two single digit numbers together ask them to tell you about how many days they will go to school this month if they go 4 days this week, 2 days next week, 4 days the third week, and 5 days the last week.
- Estimation skills are especially important with the increased use of calculators. It's easy to press the wrong button but assume because the calculator completed the problem, the answer must be correct. Estimating skills will give your child a reasonable idea of what the answer should be. Present a problem like . . .  **$305 - 129 = ?$**  Ask your child to estimate what the answer should be before solving it on the calculator. A useful strategy for estimating the answer would be to change the 305 to 300 and the 129 to 100. Then it is quickly a process of subtracting 100 from 300.



- Counting games that give children experience in counting by 2's, 3's, 5's, and 10's etc. will help them in problem solving and estimating answers.
- I'm thinking of a number game . . . these are always fun. It's a number between 1 and 20. It has two digits and the digits add up to five. If you subtract the ten's digit from the one's digit, the answer is 3. The mystery number is 14. Have your child think up mystery number problems for friends and family to solve.
- Take your child to the grocery store and have them pretend they are in charge of buying snacks for a camping trip. Set a budget and let them produce a grocery list with prices that stay within the budget. This game could be played by using advertisements in the newspaper.
- Encourage your child to play "store" using empty cans and boxes, setting prices, totaling customer purchases, and making change.

## ADDITION BASIC FACTS

$0 + 0 = 0$

$0 + 1 = 1$

$0 + 2 = 2$

$0 + 3 = 3$

$0 + 4 = 4$

$0 + 5 = 5$

$0 + 6 = 6$

$0 + 7 = 7$

$0 + 8 = 8$

$0 + 9 = 9$

$1 + 0 = 1$

$1 + 1 = 2$

$1 + 2 = 3$

$1 + 3 = 4$

$1 + 4 = 5$

$1 + 5 = 6$

$1 + 6 = 7$

$1 + 7 = 8$

$1 + 8 = 9$

$1 + 9 = 10$

$2 + 0 = 2$

$2 + 1 = 3$

$2 + 2 = 4$

$2 + 3 = 5$

$2 + 4 = 6$

$2 + 5 = 7$

$2 + 6 = 8$

$2 + 7 = 9$

$2 + 8 = 10$

$2 + 9 = 11$

$3 + 0 = 3$

$3 + 1 = 4$

$3 + 2 = 5$

$3 + 3 = 6$

$3 + 4 = 7$

$3 + 5 = 8$

$3 + 6 = 9$

$3 + 7 = 10$

$3 + 8 = 11$

$3 + 9 = 12$

$4 + 0 = 4$

$4 + 1 = 5$

$4 + 2 = 6$

$4 + 3 = 7$

$4 + 4 = 8$

$4 + 5 = 9$

$4 + 6 = 10$

$4 + 7 = 11$

$4 + 8 = 12$

$4 + 9 = 13$

$5 + 0 = 5$

$5 + 1 = 6$

$5 + 2 = 7$

$5 + 3 = 8$

$5 + 4 = 9$

$5 + 5 = 10$

$5 + 6 = 11$

$5 + 7 = 12$

$5 + 8 = 13$

$5 + 9 = 14$

$6 + 0 = 6$

$6 + 1 = 7$

$6 + 2 = 8$

$6 + 3 = 9$

$6 + 4 = 10$

$6 + 5 = 11$

$6 + 6 = 12$

$6 + 7 = 13$

$6 + 8 = 14$

$6 + 9 = 15$

$7 + 0 = 7$

$7 + 1 = 8$

$7 + 2 = 9$

$7 + 3 = 10$

$7 + 4 = 11$

$7 + 5 = 12$

$7 + 6 = 13$

$7 + 7 = 14$

$7 + 8 = 15$

$7 + 9 = 16$

$8 + 0 = 8$

$8 + 1 = 9$

$8 + 2 = 10$

$8 + 3 = 11$

$8 + 4 = 12$

$8 + 5 = 13$

$8 + 6 = 14$

$8 + 7 = 15$

$8 + 8 = 16$

$8 + 9 = 17$

$9 + 0 = 9$

$9 + 1 = 10$

$9 + 2 = 11$

$9 + 3 = 12$

$9 + 4 = 13$

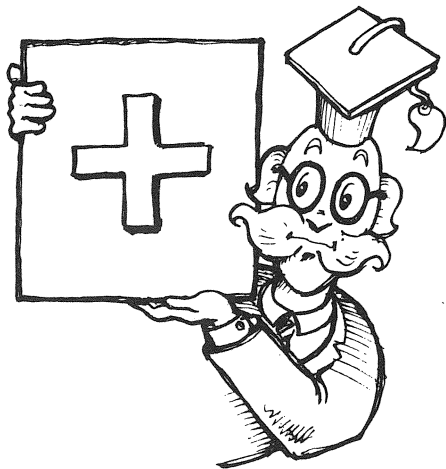
$9 + 5 = 14$

$9 + 6 = 15$

$9 + 7 = 16$

$9 + 8 = 17$

$9 + 9 = 18$



# SUBTRACTION BASIC FACTS

$0 - 0 = 0$

$1 - 0 = 1$

$2 - 0 = 2$

$3 - 0 = 3$

$1 - 1 = 0$

$2 - 1 = 1$

$3 - 1 = 2$

$2 - 2 = 0$

$3 - 2 = 1$

$3 - 3 = 0$

$4 - 0 = 4$

$5 - 0 = 5$

$6 - 0 = 6$

$7 - 0 = 7$

$4 - 1 = 3$

$5 - 1 = 4$

$6 - 1 = 5$

$7 - 1 = 6$

$4 - 2 = 2$

$5 - 2 = 3$

$6 - 2 = 4$

$7 - 2 = 5$

$4 - 3 = 1$

$5 - 3 = 2$

$6 - 3 = 3$

$7 - 3 = 4$

$4 - 4 = 0$

$5 - 4 = 1$

$6 - 4 = 2$

$7 - 4 = 3$

$5 - 5 = 0$

$6 - 5 = 1$

$7 - 5 = 2$

$6 - 6 = 0$

$7 - 6 = 1$

$7 - 7 = 0$

$8 - 0 = 8$

$9 - 0 = 9$

$8 - 1 = 7$

$9 - 1 = 8$

$8 - 2 = 6$

$9 - 2 = 7$

$8 - 3 = 5$

$9 - 3 = 6$

$8 - 4 = 4$

$9 - 4 = 5$

$8 - 5 = 3$

$9 - 5 = 4$

$8 - 6 = 2$

$9 - 6 = 3$

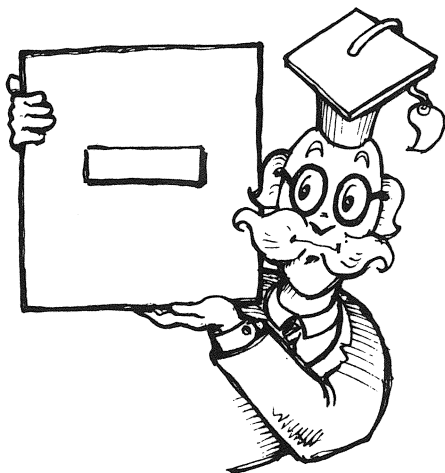
$8 - 7 = 1$

$9 - 7 = 2$

$8 - 8 = 0$

$9 - 8 = 1$

$9 - 9 = 0$

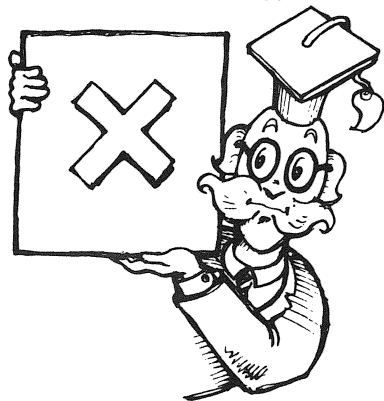


# MULTIPLICATION BASIC FACTS

|                    |                    |                    |                    |
|--------------------|--------------------|--------------------|--------------------|
| $1 \times 1 = 1$   | $2 \times 1 = 2$   | $3 \times 1 = 3$   | $4 \times 1 = 4$   |
| $1 \times 2 = 2$   | $2 \times 2 = 4$   | $3 \times 2 = 6$   | $4 \times 2 = 8$   |
| $1 \times 3 = 3$   | $2 \times 3 = 6$   | $3 \times 3 = 9$   | $4 \times 3 = 12$  |
| $1 \times 4 = 4$   | $2 \times 4 = 8$   | $3 \times 4 = 12$  | $4 \times 4 = 16$  |
| $1 \times 5 = 5$   | $2 \times 5 = 10$  | $3 \times 5 = 15$  | $4 \times 5 = 20$  |
| $1 \times 6 = 6$   | $2 \times 6 = 12$  | $3 \times 6 = 18$  | $4 \times 6 = 24$  |
| $1 \times 7 = 7$   | $2 \times 7 = 14$  | $3 \times 7 = 21$  | $4 \times 7 = 28$  |
| $1 \times 8 = 8$   | $2 \times 8 = 16$  | $3 \times 8 = 24$  | $4 \times 8 = 32$  |
| $1 \times 9 = 9$   | $2 \times 9 = 18$  | $3 \times 9 = 27$  | $4 \times 9 = 36$  |
| $1 \times 10 = 10$ | $2 \times 10 = 20$ | $3 \times 10 = 30$ | $4 \times 10 = 40$ |

|                    |                    |                    |                    |
|--------------------|--------------------|--------------------|--------------------|
| $5 \times 1 = 5$   | $6 \times 1 = 6$   | $7 \times 1 = 7$   | $8 \times 1 = 8$   |
| $5 \times 2 = 10$  | $6 \times 2 = 12$  | $7 \times 2 = 14$  | $8 \times 2 = 16$  |
| $5 \times 3 = 15$  | $6 \times 3 = 18$  | $7 \times 3 = 21$  | $8 \times 3 = 24$  |
| $5 \times 4 = 20$  | $6 \times 4 = 24$  | $7 \times 4 = 28$  | $8 \times 4 = 32$  |
| $5 \times 5 = 25$  | $6 \times 5 = 30$  | $7 \times 5 = 35$  | $8 \times 5 = 40$  |
| $5 \times 6 = 30$  | $6 \times 6 = 36$  | $7 \times 6 = 42$  | $8 \times 6 = 48$  |
| $5 \times 7 = 35$  | $6 \times 7 = 42$  | $7 \times 7 = 49$  | $8 \times 7 = 56$  |
| $5 \times 8 = 40$  | $6 \times 8 = 48$  | $7 \times 8 = 56$  | $8 \times 8 = 64$  |
| $5 \times 9 = 45$  | $6 \times 9 = 54$  | $7 \times 9 = 63$  | $8 \times 9 = 72$  |
| $5 \times 10 = 50$ | $6 \times 10 = 60$ | $7 \times 10 = 70$ | $8 \times 10 = 80$ |

|                    |                      |
|--------------------|----------------------|
| $9 \times 1 = 9$   | $10 \times 1 = 10$   |
| $9 \times 2 = 18$  | $10 \times 2 = 20$   |
| $9 \times 3 = 27$  | $10 \times 3 = 30$   |
| $9 \times 4 = 36$  | $10 \times 4 = 40$   |
| $9 \times 5 = 45$  | $10 \times 5 = 50$   |
| $9 \times 6 = 54$  | $10 \times 6 = 60$   |
| $9 \times 7 = 63$  | $10 \times 7 = 70$   |
| $9 \times 8 = 72$  | $10 \times 8 = 80$   |
| $9 \times 9 = 81$  | $10 \times 9 = 90$   |
| $9 \times 10 = 90$ | $10 \times 10 = 100$ |

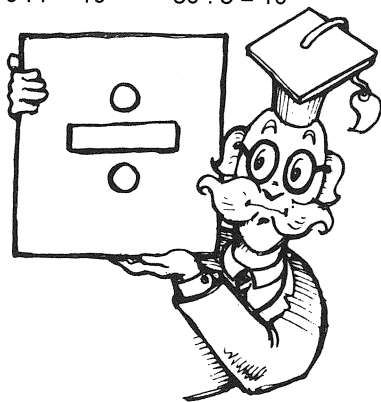


# DIVISION BASIC FACTS

|               |               |               |               |
|---------------|---------------|---------------|---------------|
| $1 : 1 = 1$   | $2 : 2 = 1$   | $3 : 3 = 1$   | $4 : 4 = 1$   |
| $2 : 1 = 2$   | $4 : 2 = 2$   | $6 : 3 = 2$   | $8 : 4 = 2$   |
| $3 : 1 = 3$   | $6 : 2 = 3$   | $9 : 3 = 3$   | $12 : 4 = 3$  |
| $4 : 1 = 4$   | $8 : 2 = 4$   | $12 : 3 = 4$  | $16 : 4 = 4$  |
| $5 : 1 = 5$   | $10 : 2 = 5$  | $15 : 3 = 5$  | $20 : 4 = 5$  |
| $6 : 1 = 6$   | $12 : 2 = 6$  | $18 : 3 = 6$  | $24 : 4 = 6$  |
| $7 : 1 = 7$   | $14 : 2 = 7$  | $21 : 3 = 7$  | $28 : 4 = 7$  |
| $8 : 1 = 8$   | $16 : 2 = 8$  | $24 : 3 = 8$  | $32 : 4 = 8$  |
| $9 : 1 = 9$   | $18 : 2 = 9$  | $27 : 3 = 9$  | $36 : 4 = 9$  |
| $10 : 1 = 10$ | $20 : 2 = 10$ | $30 : 3 = 10$ | $40 : 4 = 10$ |

|               |               |               |               |
|---------------|---------------|---------------|---------------|
| $5 : 5 = 1$   | $6 : 6 = 1$   | $7 : 7 = 1$   | $8 : 8 = 1$   |
| $10 : 5 = 2$  | $12 : 6 = 2$  | $14 : 7 = 2$  | $16 : 8 = 2$  |
| $15 : 5 = 3$  | $18 : 6 = 3$  | $21 : 7 = 3$  | $24 : 8 = 3$  |
| $20 : 5 = 4$  | $24 : 6 = 4$  | $28 : 7 = 4$  | $32 : 8 = 4$  |
| $25 : 5 = 5$  | $30 : 6 = 5$  | $35 : 7 = 5$  | $40 : 8 = 5$  |
| $30 : 5 = 6$  | $36 : 6 = 6$  | $42 : 7 = 6$  | $48 : 8 = 6$  |
| $35 : 5 = 7$  | $42 : 6 = 7$  | $49 : 7 = 7$  | $56 : 8 = 7$  |
| $40 : 5 = 8$  | $48 : 6 = 8$  | $56 : 7 = 8$  | $64 : 8 = 8$  |
| $45 : 5 = 9$  | $54 : 6 = 9$  | $63 : 7 = 9$  | $72 : 8 = 9$  |
| $50 : 5 = 10$ | $60 : 6 = 10$ | $70 : 7 = 10$ | $80 : 8 = 10$ |

|               |                 |
|---------------|-----------------|
| $9 : 9 = 1$   | $10 : 10 = 1$   |
| $18 : 9 = 2$  | $20 : 10 = 2$   |
| $27 : 9 = 3$  | $30 : 10 = 3$   |
| $36 : 9 = 4$  | $40 : 10 = 4$   |
| $45 : 9 = 5$  | $50 : 10 = 5$   |
| $54 : 9 = 6$  | $60 : 10 = 6$   |
| $63 : 9 = 7$  | $70 : 10 = 7$   |
| $72 : 9 = 8$  | $80 : 10 = 8$   |
| $81 : 9 = 9$  | $90 : 10 = 9$   |
| $90 : 9 = 10$ | $100 : 10 = 10$ |





2845 Temple Avenue, Long Beach, CA 90806 (213) 595-7006