

THE STORY OF

DATAMAN™



The Characters:

DataMan – A tiny robot, hardly bigger than your hand, with the brain of a computer and the heart of a friend. DataMan was designed for a very special mission by . . .

Commander NumberFun – Wise ruler of a faraway planet. He taught DataMan the secrets of an advanced people, and sent him on a journey through space to teach the wonder of numbers to all.

AntiMath – Evil wizard from a dark star who has the mysterious power to cloud the minds of his victims and steal away the fun and excitement of mathematics.

Somewhere among the stars, trouble was stirring. DataMan could feel it in his circuits as he sped past the Big Dipper. The evil wizard AntiMath must be up to his old tricks again.

DataMan knew his enemy well. He knew that because of the evil AntiMath, someone at this very moment was missing out on the fun and excitement of numbers. DataMan knew he could help.

DataMan was perfectly built for his mission. His super-sensitive sensors told him quickly where the trouble was. This time, the trouble signals were coming from the blue planet Earth.

DataMan tuned in the good Commander's channel.

"DataMan to Commander NumberFun," he said.

From a faraway planet a voice answered.

"We hear you, DataMan. Go ahead."

"Sir, it's AntiMath. He's up to no good again," said DataMan, his lights blinking furiously. "I ask your permission to proceed to Planet Earth. Evil AntiMath is passing close to the young Earthlings."

"Tell me the situation, DataMan."

"Sir, the young Earthlings are smart and eager to learn. But I fear that AntiMath will get them in his clutches. They must discover the wonders of *NumberFun* before it's too late. I must go there now!"

The Commander's answer was swift. "Proceed to Planet Earth, DataMan. Drive out the evil AntiMath. Become friends with the young Earthlings. Teach them the secrets of *NumberFun*."

There was an electric whir and a blue-green flash. DataMan was rocketing through space toward Earth.

And that, Earthlings, is how DataMan came into your world.

A WORD TO PARENTS: DataManTM was designed with the help of educators to help provide fun, drill and practice with numbers. DataMan is easy to use, and many children will be able to read *The Story of DataMan* by themselves and learn how to play DataMan's many learning games.

To help answer questions that may arise, and to familiarize you with DataMan, see *Hints for Parents and Teachers*, page 19. Parents of very young children will probably have best results if they become familiar with the operation of DataMan, and then explain one activity at a time to their children with the help of the story book pages.

DATAMAN'S MESSAGE:

The Secrets of NumberFun

As I was coming through space, on my way to Earth, I could see that many of you were already practicing math . . . Good! I'd like to help you practice, and also to teach you some games and secrets that can make mathematics more fun for you — right

while you're learning about it.

On my home planet we call these games and secrets *NumberFun*, and once you know them, you will find it easier to handle AntiMath if he ever comes around.

TURNING DATAMAN ON:

Answer Checker



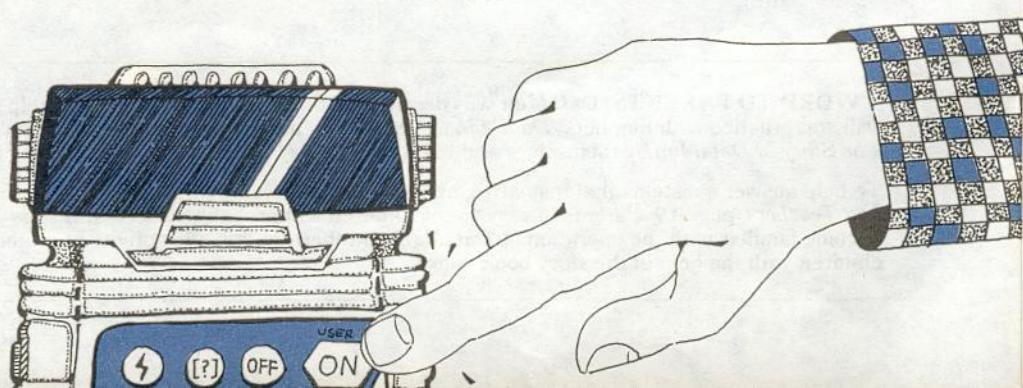
To begin, just press my key. I'll let you know that I'm on and O.K. by showing you an equals sign (=) in my face mask.

Just as soon as you turn me on, I'm "at your service" as your own *Answer Checker*.

As you can see, I have keys you press to make me work. Some of my keys have numbers on them. I also

have keys with plus (+), minus (-), times (×), divide (÷) and equals (=) signs on them. My other keys are for some special games that I'll show you later.

To let me be your *Answer Checker*, you just use my keys to put in a problem you'd like to try. Then, put in your answer. I'll tell you if you're right or wrong, and keep your score for you!



PLEASE TRY ME OUT:

Try pressing these keys:

[2] [+] [2] [=]

You know the answer to this one is 4. Press my **[4]** key, and watch what happens!

When I flash my lights that way, it means that you're right. Try another one, like **[3] [+] [5] [=]**

If you should put in a wrong answer, I'll let you know by flashing EEE, and blinking all my lights. Then, I'll give you another try. If your second try is still wrong, I'll flash EEE again, and show you the right answer!

I'LL KEEP YOUR SCORE

After you try ten problems, I'll put your score in lights with two numbers like this:

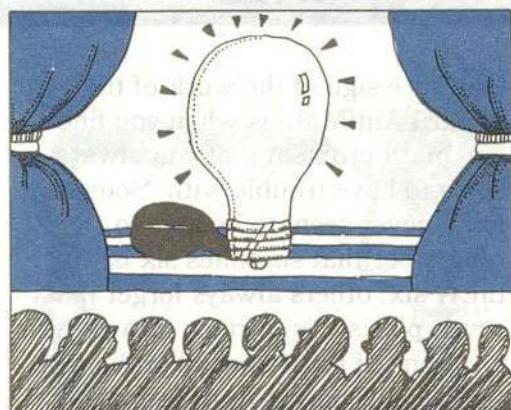
9

10

*this is your
number of
right answers*

*this is the
number of
problems you tried*

Then, depending on how well you did, I'll show you one of my special light shows — as a reward for your good work!

**DIVISION PROBLEMS**

When you use me to practice division (\div), some of your problems will have answers with *remainders*. I'll help you with these. You just put in the whole number part of the answer — I'll put an "r" in my face mask to let you know that the answer has a remainder, and then I'll show you what it is!

Turning DataMan Off

OFF

Whenever you are finished playing with me — just press my **[OFF]** key. I'll wait for the next time you press my **[ON/ENTRY]** key to play again.

If sometime you should forget to turn

me off, don't worry. To save my battery, Commander NumberFun has set me to *shut off* when you do not use me for about five minutes. That way my battery will last a long, long time. I'll be ready when you are!

DATAMAN REMEMBERS

The Memory Bank



One sure sign of the work of the Wizard AntiMath is when you find one math problem that you always seem to have trouble with. Some folks never seem to be able to remember that six times six is thirty-six; others always forget that seven plus six is thirteen. Maybe you have one of those special problems, too! This is one of AntiMath's favorite tricks!

When the people of my planet built me, they knew of AntiMath's ways. They put a special *MEMORY BANK* inside me, so that I can *remember* problems that you may have trouble with, and help you practice them.

Imagine AntiMath's surprise when you always have the right answer — even to his most puzzling problems!

HERE'S HOW TO USE MY MEMORY BANK:

You, one of your friends, or Mom or Dad can put up to ten problems in my memory bank. Here's how:

- Just put in the problem like $2 + 7 =$, then
- Press my Memory Bank Key: 
- Keep doing this for up to ten problems.

I will take each problem, and store it in my memory. You can practice the problems later on by pressing my **GO** key.

Each time you press **GO**, I'll take a problem from my memory and give you two tries to get it right. When you've tried all of the problems, I'll show you your score like this:

*this is your
number of
right answers*

8	9	25
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*this is the
number of
problems
you tried*

*this third number
is the number
of ticks of my
atom clock it took
you to finish*

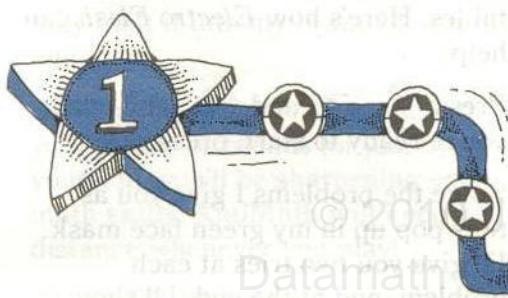
After I show your score, I'll reward your work with another one of my Atomiclight shows.

$$\begin{aligned} 6 \times 6 &= 36 \\ 7 + 6 &= 13 \\ 7 \times 7 &= 49 \end{aligned}$$



A DATAMAN GAME: *Starmath Race*

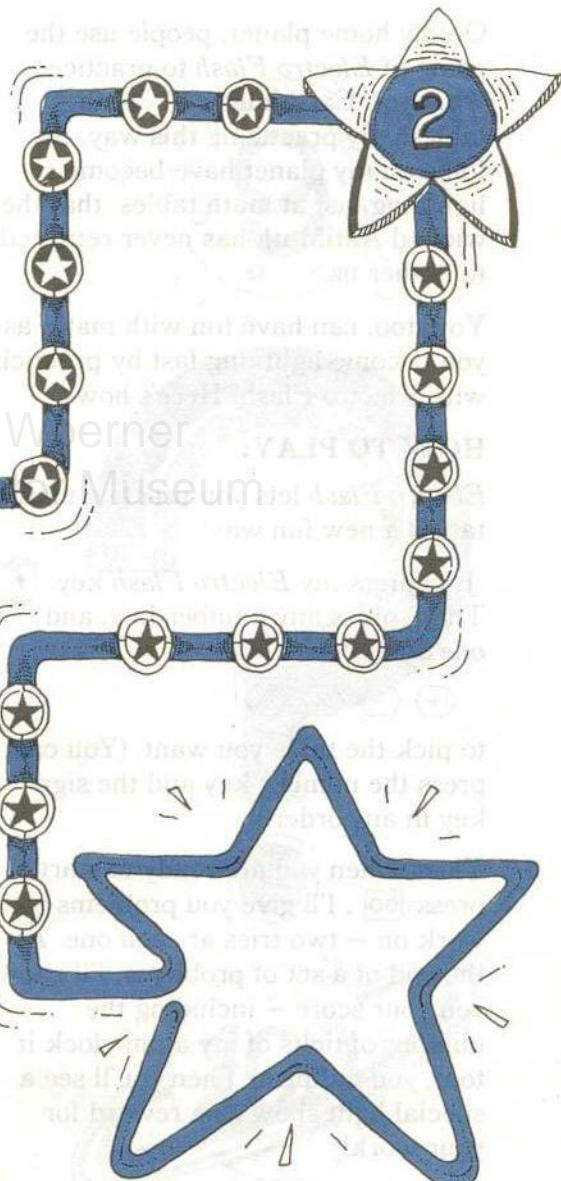
Here's a game you can play using my Memory Bank. Play this game often and you'll be ready if AntiMath ever visits your planet with his bag of tricky problems!



You put ten tricky problems into my memory bank, and hand me to a friend. Your friend presses **GO** and tries to get a perfect score — ten right out of ten tried — in the shortest time. Then your friend puts in ten problems for your turn.

Play until you both get a perfect score, and when you do, remember how many ticks of my atom clock it took. (This is the *third* number, the one to the right of your score.) The one who gets ten problems right in the shortest time **WINS!**

You can play this or any of my games anywhere you go! Try playing this one with Mom or Dad next time you're traveling in your car.



LIGHTNING MATH!

Electro Flash

On my home planet, people use the game of *Electro Flash* to practice what you Earthlings call "math tables". By practicing this way, the folks on my planet have become so lightning fast at math tables that the wicked AntiMath has never returned to bother us.

You, too, can have fun with math, as you become lightning fast by practicing with *Electro Flash*! Here's how.

HOW TO PLAY:

Electro Flash lets you practice math tables a new fun way!

Just press my *Electro Flash* key:  Then, press any number key, and one of my four keys



to pick the table you want. (You can press the number key and the sign key in any order.)

Then, when you are ready to start, press **GO**. I'll give you problems to work on — two tries at each one. At the end of a set of problems, I'll show you your score — including the number of ticks of my atom clock it took you to finish. Then you'll see a special light show as a reward for your work!

TRY THIS ONE:

Press my  key and my

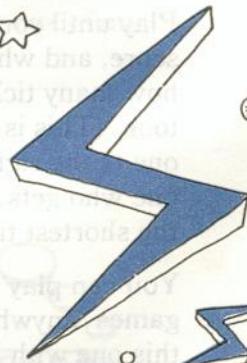
Electro Flash key 

Let's say that you want to become lightning fast at the "five times" tables. Here's how *Electro Flash* can help:

Press , **5** and GO.

Solve the problems I give you as they pop up in my green face mask. I'll give you two tries at each problem, and at the end I'll show you your score and how long you took.

Keep playing *Electro Flash* until you are lightning fast at your math tables. When you and your friends are lightning fast, AntiMath won't have a chance!



A FUN-WITH-NUMBERS GAME!

Number Guesser

One thing that annoys AntiMath and makes him green with envy is people having *fun* with numbers and mathematics! The people on my planet have enjoyed games like *Number Guesser* for years, and so they built it into my brain for you to enjoy, too.

As you play *Number Guesser* with your family or friends (or just by yourself), you'll be sharpening your math skills. AntiMath will keep his distance whenever you play!

HOW TO PLAY:

Just press  and the *Number Guesser* key: 

I'll pick a secret number for you to guess. It will be somewhere between 9 and 100. You enter your guess. When you do, I'll flash and show you two numbers in my face mask. The secret number is always somewhere *between* the two numbers I show you.

When you finally guess the secret number, I'll show you the number of tries it took, and then a great light show!

Take turns with your friends trying to guess the secret number in the fewest tries. I'll pick a new secret number each time you press .



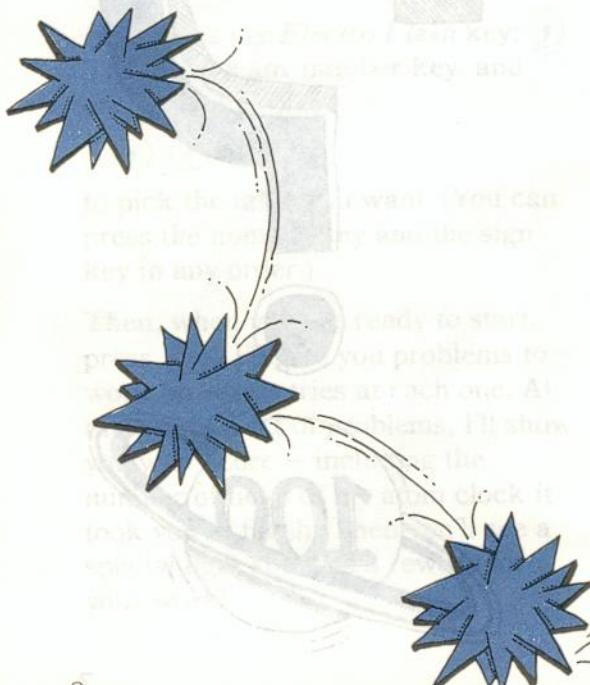
TEST YOUR SPEED! TRY YOUR SKILL!

Wipe Out



Once, I was nearly captured by the Wizard AntiMath on a moon of the icy planet, Froze. He threatened to keep me and my secrets locked up forever. My friends saved me by moving me between them with such great speed that it confused the old wizard. Before he knew what was happening, I was off in a flash!

It was so much fun, I decided to make up a game to play with my friends just in case AntiMath ever has me cornered again. It's called *Wipe Out*.

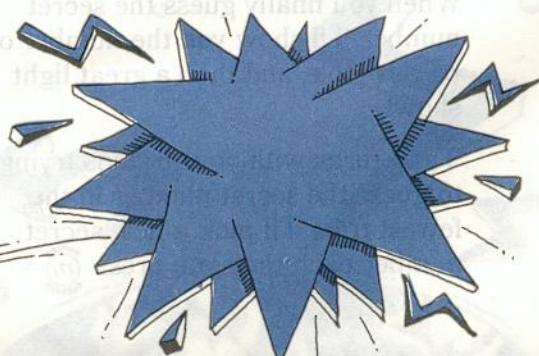


HOW TO PLAY:

Wipe Out is a race against my timer for you and your friends. When it's your turn, you must answer the problem I give you and quickly pass me to the next player. Each player puts in an answer and passes me on as quickly as possible. Only I know when time will run out — and when it does, my lights will *Wipe Out* in a long "light show". The person holding me at that time is out of the game. Keep on playing until only one person is left: the winner!

To begin, just press my  key, and the *Wipe Out* key: .

When you're ready to start, press  and put in your answer as fast as you can. You have to give me a right answer before you pass me to the next player. If you miss the problem twice, I'll answer the problem for you. You need to work the next problem before you pass me on.



Force Out



Force Out is one type of game that I have seen being played on planets everywhere — particularly in places where people need to learn to think ahead. It is quite an old game on my home planet. You play *Force Out* with one or more of your friends.

HOW TO PLAY:

Force Out is a subtraction game that starts out with a number that I pick for you and your friends. You take turns subtracting numbers from the one I've chosen, until the result is zero. The player who subtracts the *last* number, and gets the zero, *loses* and is out of the game.

To begin, decide who goes first, and press my

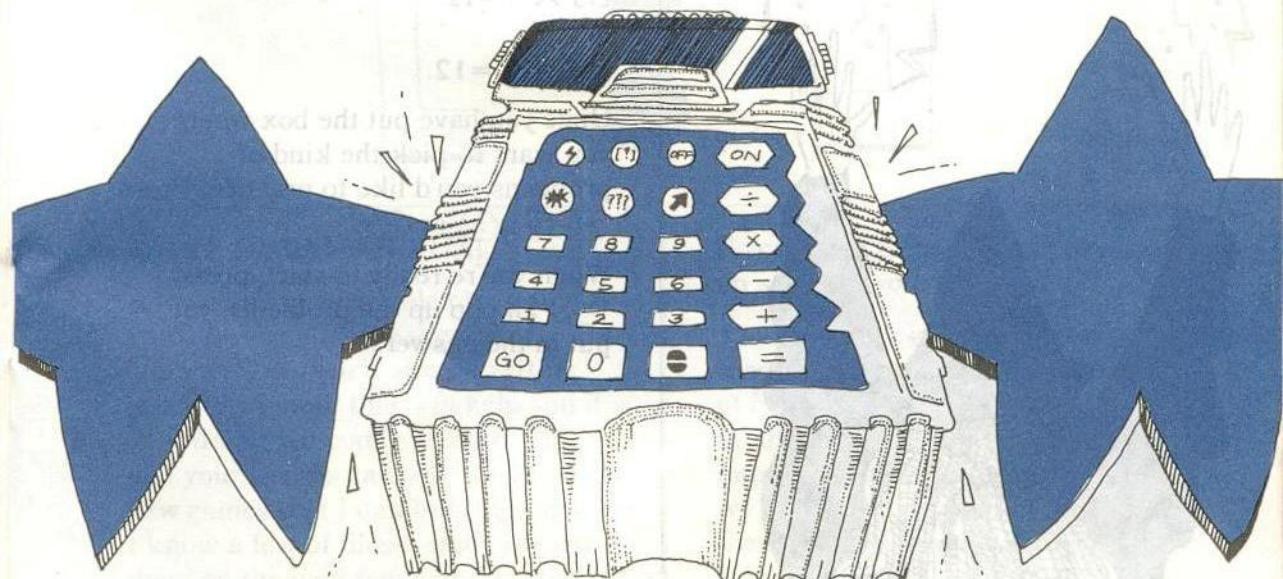
Force Out key:

I'll pick a number to start the game and show it to you like this:

$$37 - [] =$$

When it's your turn, put in a number from 1 to 9. (I won't let you put in a zero!) I'll subtract it for you and show you the result. Then give it to the next player for their number. If you make me end on 0, you lose!

Watch out, think ahead, and HAVE FUN!

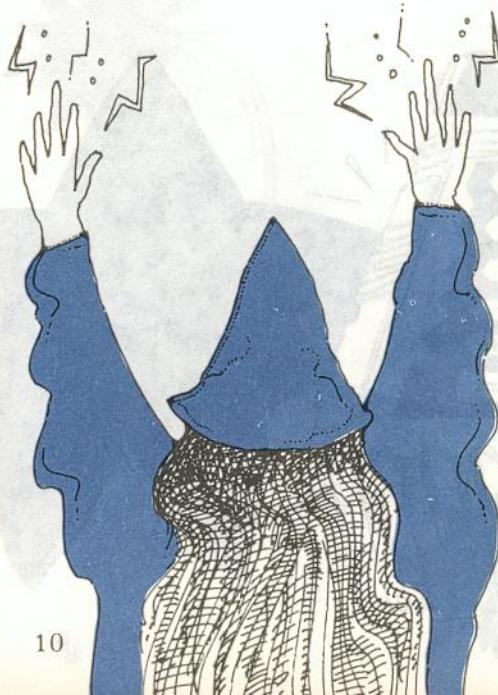


Missing Number "Box" Problems



The evil wizard has always tried to make numbers and mathematics a lot harder to understand than they really are. One of his favorite tricks is to take a math problem you know the answer to, move things around a little, and try to hide the answer.

The people of my planet decided that it would be easy to create a game that would help folks learn to find the answer to math problems, even if the numbers in the problem had been moved around.



THE MISSING NUMBER GAME:

To begin, press my **ON** key, and then my *Missing Numbers* key: **(?)**

Keep pressing the **(?)** key for a while. Watch what happens. The box [] keeps moving from the left to the right of the problem. Keep pressing the key until the box stops where you want to put your answer in the problem.

This lets you choose problems like:

$$4 \times 3 = [?]$$

or

$$[?] \times 3 = 12$$

or

$$4 \times [?] = 12.$$

Once you have put the box where you want it, pick the kind of problems you'd like to practice. Press **(+)** **(-)** **(×)** or **(÷)**.

When you're ready to start, press **GO**! I'll pop up the problems, you put in the answers!

At the end of ten problems, I'll show you your score, along with the time, like this:

this is the
number right
/

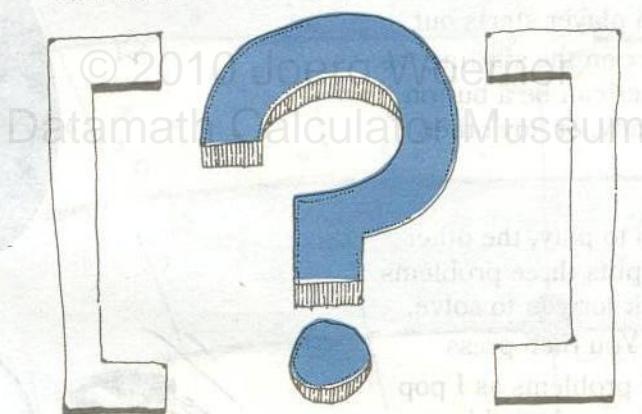
8 10 24

this is the
number of
problems
you tried

this is the time
(number of ticks
of my atom clock)
that it took you
to finish.

You can take turns playing with a friend — see who can get a perfect score in the shortest time!

I'll start you off with easy problems. If you'd like harder ones to practice, follow the same directions as before, but this time put in a **2** right before you press **GO**. To go back to the easy problems, press **1** before **GO**.



MORE DATAMAN FUN!

As you and your friends play games, you'll be learning the secrets of NumberFun. You'll also be getting practice in math that will help you if AntiMath ever comes around. You and your friends can also make up new games that I can help you play. I know a few of these, and have put them on the next few pages for you.

If you enjoy these, be sure to make up some on your own!

The more you enjoy my games, the more you'll see that the secrets of NumberFun are really not secrets at all. Numbers *ARE* fun, they're important, and they help all of us as we go through life. Once you know these secrets, AntiMath doesn't have a chance!

Orbit Math!

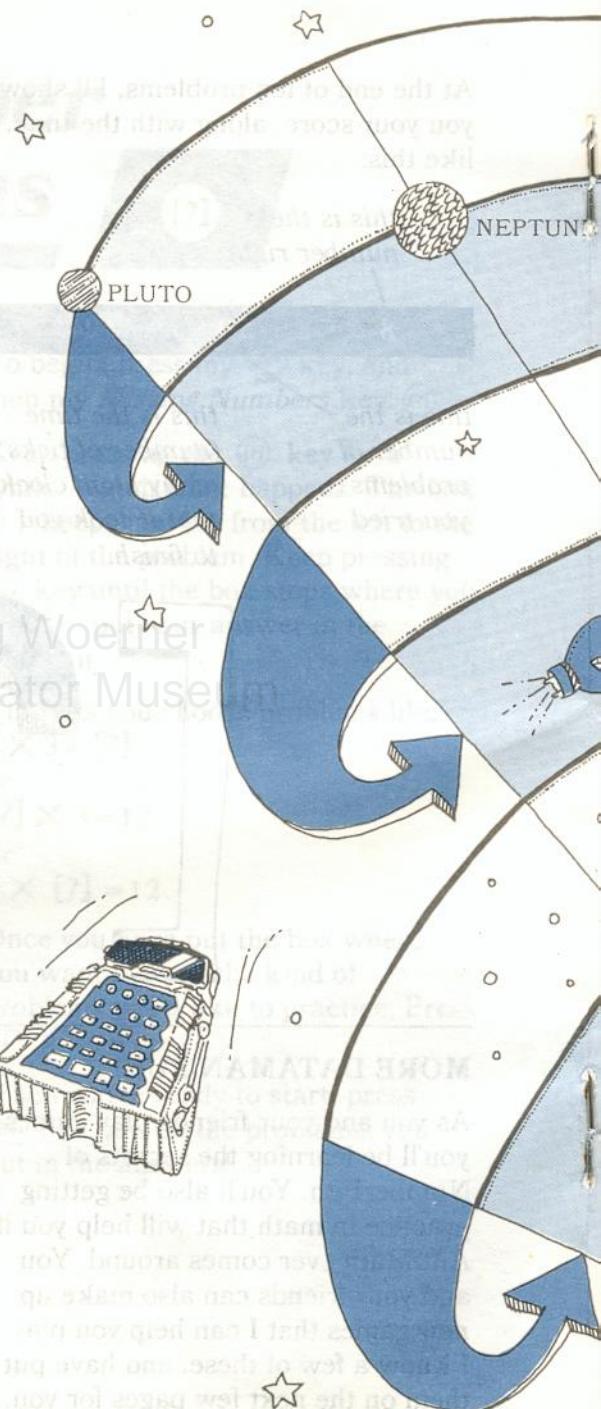
On my way to Earth, I passed near the eight other planets that are close to your sun. These planets move in beautiful paths around the sun called *orbits*. As I moved from orbit to orbit, I thought up the game of *Orbit Math*. It's fun, and it will give you and your friends practice that will help drive AntiMath away forever!

You can play *Orbit Math* with one or more friends. Each player starts out by putting a marker on the starting arrow. (Your marker can be a button, a small piece of candy, or any other small object.)

When it's your turn to play, the other player (or players) puts three problems in my memory bank for you to solve, using my  key. You then press

[GO], and solve the problems as I pop them up for you. For each problem you get right on the first try, move forward two spaces. If you get a problem right on the second try, move one space. If it takes more than two tries for a problem, you lose your turn.

The player who reaches the sun first is the winner!





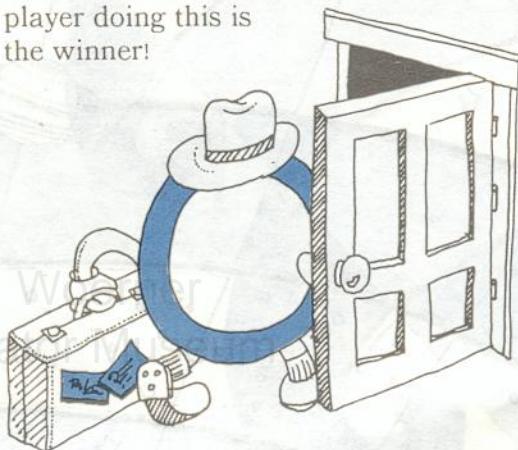
First Out!

The game of *Force Out*, which you have already learned about, is a very old game. Many people have enjoyed it on my planet for years!

The children on my planet discovered that it's fun to play the *Force Out* game backwards, too! When you play the game this way, it's called *First Out*, and here's how it goes:

Decide who goes first, press my  key, and then press my  key. I'll pick a starting number and show it to you. When it's your turn, press a number key. I'll subtract that number from the one in my display, and show you the result.

After your turn, pass me to the next player, and he or she picks a number for me to subtract. In this game the object is to *try to be the player who makes my display go to zero!* The player doing this is the winner!



Space Ball!

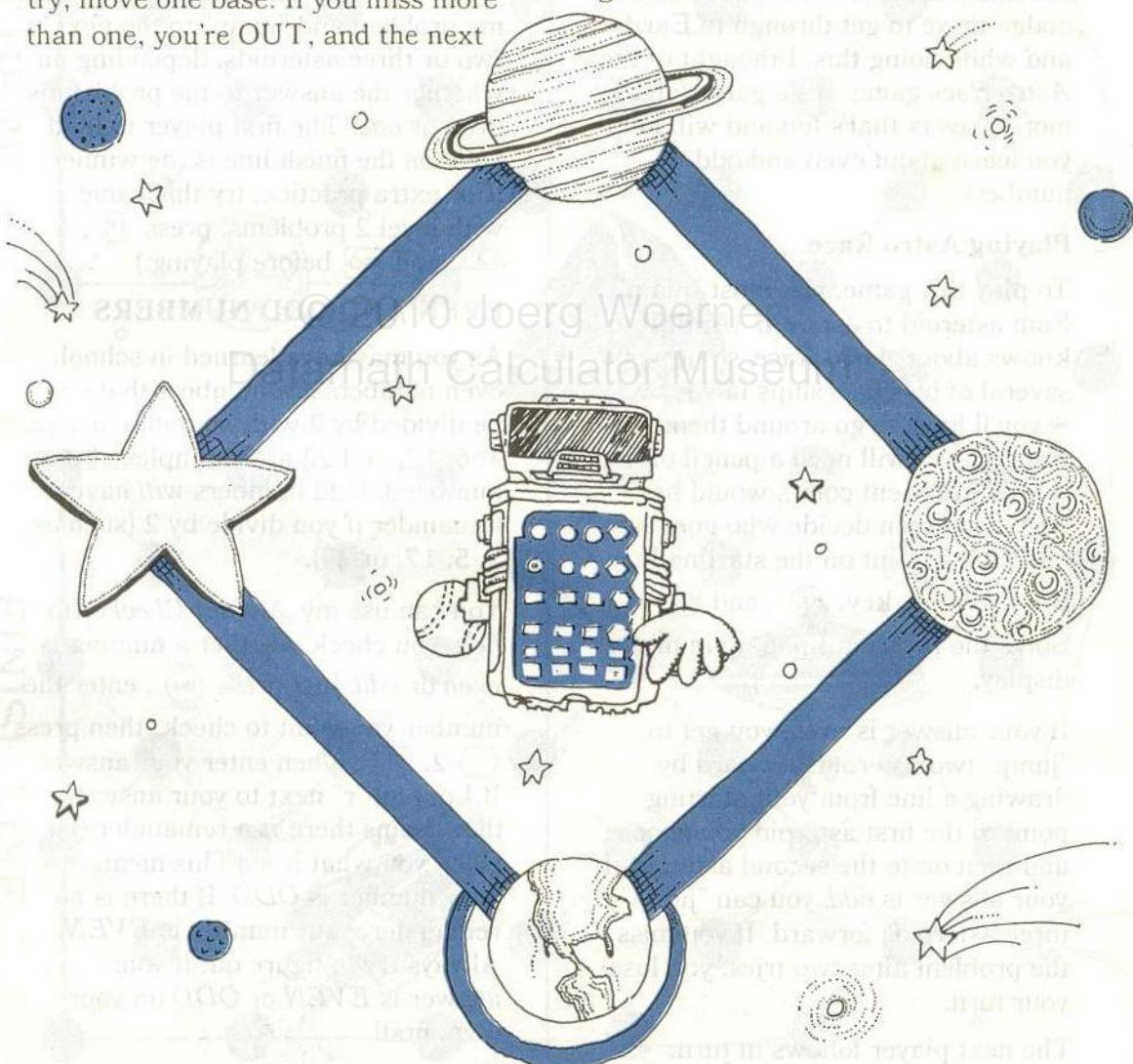
On my way down to Earth, I saw many of you enjoying a game called Baseball. *Space Ball* is a game played on a field that looks just like a baseball field. You can play this game with your friends if one of your baseball games is "rained out". Here's how to play:

You and your friends choose two teams. The players on each team take turns *at bat* and moving around the bases. Each time a player gets to home base, he scores one run for his team. Use a marker (a penny or small piece of candy) on the game board for each player on base, starting at *home planet*.

When it's your turn to bat, the other team presses my  key, and my  key, and selects a math table for you to practice. You then press **GO**, and solve the problems I pop up. If you get all the problems right on the first try, you get to move two bases. If you miss one problem on the first try, move one base. If you miss more than one, you're OUT, and the next

player on your team is up. The players *on base* move the same number of bases as the batter who's up. When your team has three outs, the other team is up.

Decide before you start how many "innings" you'd like to play. The team with the most runs at the end of the game WINS!



Astro Race

On my way to your planet, I passed between the two planets Mars and Jupiter. There I saw many brightly shining objects that Earth scientists call "Asteroids". I had to dodge these to get through to Earth, and while doing this, I thought of the *Astro Race* game. It's a game for 2 or more players that's fun and will help you learn about even and odd numbers.

Playing Astro Race

To play this game, you must "jump" from asteroid to asteroid. (AntiMath knows about *Astro Race*, so he's put several of his spaceships in your way — you'll have to go around them.) Each player will need a pencil or crayon (different colors would be best). You then decide who goes first and pick a point on the starting line.

Press my  key,  , and 

Solve the problem I pop up in my display.

If your answer is *even*, you get to "jump" two asteroids forward by drawing a line from your starting point to the first asteroid you choose and then on to the second asteroid. If your answer is *odd*, you can "jump" three asteroids forward. If you miss the problem after two tries, you lose your turn.

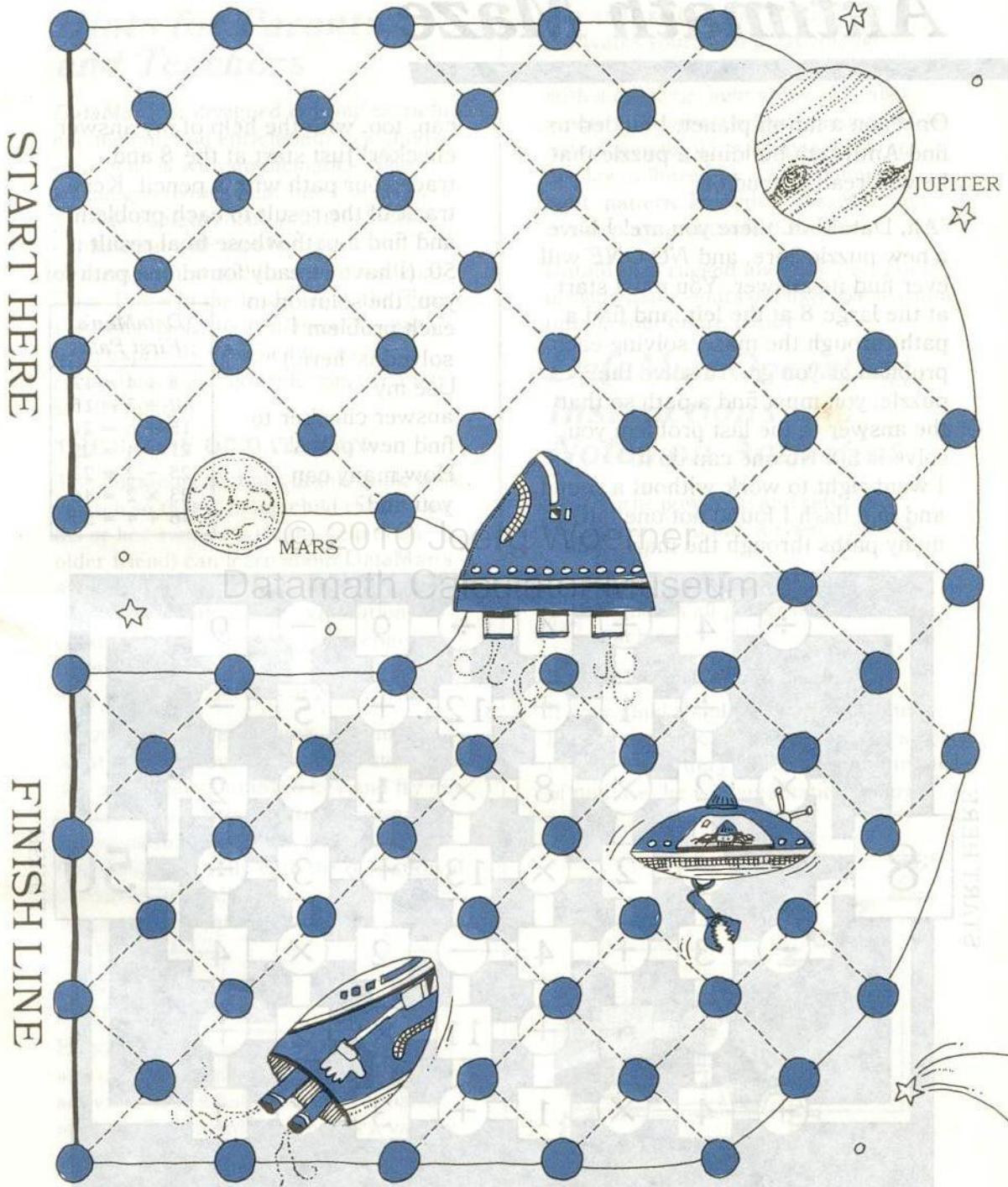
The next player follows in turn,

solves my next problem, and draws his or her own line from the starting line. (All moves must follow the dotted line from asteroid to asteroid.) When it is your turn again, you work my problem and "jump" to the next two or three asteroids, depending on whether the answer to the problem is *even* or *odd*. The first player to land *right on* the finish line is the winner. (For extra practice, try this game with level 2 problems, press  ,  , and  before playing.)

EVEN AND ODD NUMBERS

As you may have learned in school, even numbers are numbers that can be divided by 2 with *no* remainder (2, 4, 6, 12, and 22 are examples of *even* numbers). Odd numbers *will* have a remainder if you divide by 2 (such as 3, 5, 17, or 29).

You can use my *Answer Checker* to help you check whether a number is *even* or *odd*. Just press  , enter the number you want to check, then press  2,  . Then enter your answer. If I put an "r" next to your answer, that means there *is* a remainder (I'll show you what it is.) This means your number is *ODD*. If there is *no* remainder, your number is *EVEN*. Always try to figure out if your answer is *EVEN* or *ODD* on your own, first!



Antimath Maze

Once, on a far off planet, I landed to find AntiMath building a puzzle that he was really proud of.

"Ah, DataMan, there you are! I have a new puzzle here, and *NO ONE* will ever find its answer. You must start at the large 8 at the left, and find a path through the maze, solving each problem as you go. To solve the puzzle, you must find a path so that the answer to the last problem you solve is 50! No one can do it!"

I went right to work without a sound, and in a flash I found not one but many paths through the maze. You

can, too, with the help of my answer checker! Just start at the 8 and trace your path with a pencil. Keep track of the result to each problem, and find a path whose final result is 50. (I have already found one path for you; the solution to each problem I solved is [here](#).)

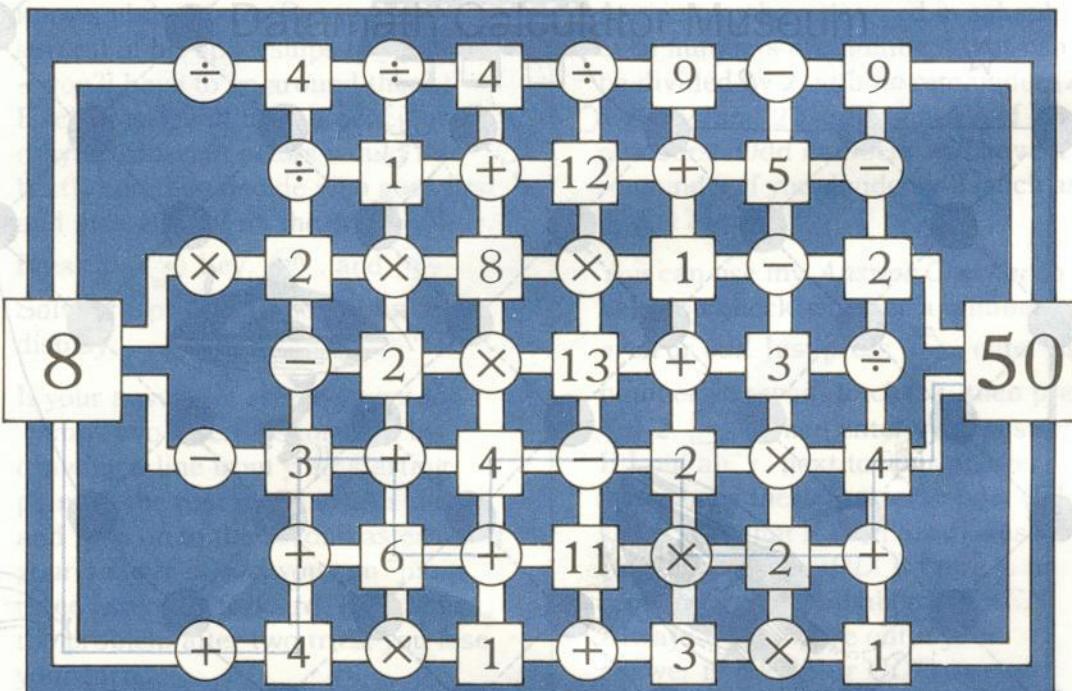
Use my answer checker to find new paths! How many can you find?

DataMan's First Path

$$\begin{aligned} 8 + 4 &= 12 \\ 12 + 3 &= 15 \\ 15 + 6 &= 21 \\ 21 + 4 &= 25 \\ 25 - 2 &= 23 \\ 23 \times 2 &= 46 \\ 46 + 4 &= 50! \end{aligned}$$

START HERE

FINISH LINE



Hints for Parents and Teachers

DataMan™ is designed to bring extra fun, excitement, and enrichment to a child's experiences with mathematics. The learning activities built into DataMan provide valuable drill, practice, and exploration with numbers for both elementary and middle school students. DataMan — in the tradition of the Texas Instruments *Little Professor*™ — has been expressly designed for easy, rewarding, and enjoyable use, even by small children.

THE STORY OF DATAMAN

The beginning sections of this book were written so that a young child reading on his or her own (or with the help of an older friend) can learn about DataMan's activities through the "Story of DataMan". With a little exploration, children will most likely begin enjoying DataMan's learning games right away as they learn the "Secrets of NumberFun".

If your child is very young, you might want to read aloud through the story that describes each DataMan key and try out the activities yourself. To answer any questions that may arise and to familiarize you fully with the operation of DataMan, we'll discuss each of his functions in greater detail in this section.

FUN AND POSITIVE REINFORCEMENT

Educators have long used flash cards and carefully constructed game-like activities to reinforce learning of basic math skills. DataMan provides a variety of enriching experiences in math in a

new and exciting way. DataMan motivates your child positively by rewarding right answers and good scores with a dazzling "light show". He also reacts to incorrect answers immediately with a simple "EEE" indication in the display, followed by a brief "blinking light" pattern. Note that DataMan will not display an incorrect answer.

DataMan is rugged and safe and should provide many hours of enjoyable learning fun for your entire family.

DataMan Operating Instructions and Notes on Activities



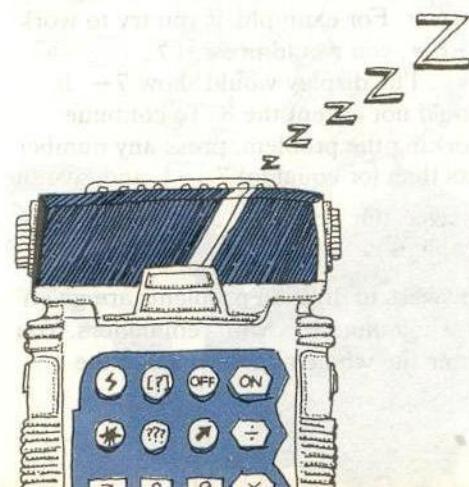
Turns power on and returns machine to the *Answer Checker* mode.



Removes all power from the machine.

POWER SAVER FEATURE:

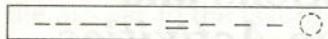
If your child should ever forget to turn DataMan off, he's designed to take steps to save his battery. After about 5 minutes of non-use, he will automatically turn himself off.



Answer Checker

When DataMan is first turned on, he is set to function as an *Answer Checker*. This mode of operation encourages children to experiment with problems and explore number relationships on their own (or with the help of the extra activities included). Here's how *Answer Checker* works:

You enter both the problem and the answer, as in $9 \square + \square 4 = \square 1 \square 3$. DataMan will indicate if the answer is right or wrong. (If the answer is right, DataMan will flash his display like this



If the answer is wrong, EEE is displayed, followed by a random blinking pattern.) If after two tries the answer entered is still wrong, DataMan will display the problem with the correct result.

DataMan will only accept *problems* with one or two digit numbers. *Answers* can be one, two, or three digits.

NOTE:

DataMan is not built to handle *negative* numbers and will not accept subtraction problems that would result in a negative answer. For example, if you try to work $7 - 8 =$, you would press $7 \square - \square 8 \square =$. The display would show $7 -$. It would not accept the 8. To continue working the problem, press any number less than (or equal to) 7, $\square =$, and give the answer. (Or press and work a new problem.)

Answers to division problems are given in whole numbers with remainders. You enter the whole number part of the

answer. DataMan will display the whole number with an "r" next to it indicating that there is a remainder. Then DataMan will compute and display the remainder.

DataMan keeps score too! After 10 problems, two numbers are displayed:

8	10
Number of right answers	Number of problems tried

After displaying the score, DataMan puts on a "light show spectacular" in his display. (The higher your score, the more the razzle dazzle.) Remember, when DataMan is first turned on, he comes on in the *Answer Checker* mode.

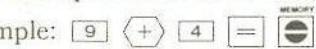
Whenever the key is pressed after that, it returns DataMan to *Answer Checker*.

With DataMan acting as *Answer Checker* children can have fun making up their own problems, computing the answer, and then checking with DataMan to see if they're right. In groups, children can make up problems for friends to try – and compete for best score. Teachers can create a variety of peer group activities for students with DataMan providing *answer checking* and fun.



Memory Bank

Using the *Memory Bank* feature, parents, teachers, or friends can put up to 10 problems into DataMan's memory for children to work. With this feature, individual "special" problems or a specific series of exercises can be practiced in a fun way, while DataMan keeps score and provides excitement. Here's how it works:

You enter and store problems with the  key. Example:  When the  key is pressed, the problem is then removed from the display, and stored in DataMan's memory. You then press  to make the problems reappear one at a time and to start DataMan's built-in timer.

You are given two tries to get the right answer to each problem. DataMan will indicate right answers with a flash and wrong answers with EEE and blinking lights, as in *Answer Checker*.

After all the stored problems have been answered, DataMan will display your score as shown below, followed by a "light show".

Number of right answers	Number of problems tried
6	7
Time taken to complete the problems - (Number of "ticks" of DataMan's clock)	

DATAMAN'S TIMER:

The time it takes to complete certain DataMan activities is clocked with his built-in Timer. A string of lights moves in a clockwise circle on the right hand side of DataMan's display whenever the timer is on. At the end of timed activities, the time it took to finish is shown as a number on the right of the display.

DataMan measures time in "ticks of his Atom Clock". The actual speed of his clock may vary depending on how fresh the battery is, room temperature, etc. The timer will, however, allow children to try to improve their speed, or to compete while playing DataMan games. Children can race to see who can complete an activity in the lowest number of "ticks" of DataMan's Atom Clock.

The *Memory Bank*, along with the light show and timer, can form the basis of many activities where children take turns *playing teacher*. Children learn by constructing problems for their friends, as well as solving problems presented by others.



Electro Flash

Electro Flash works just like electronic flash cards for basic math tables. This activity provides valuable drill in important basic facts, while children have fun competing for the best score or lowest time. To select this activity, first turn DataMan on with the  key, and then press the *Electro Flash* key: .

Select the table you want to work on by pressing an operation key ($+$ $-$ \times \div), and a number key (0-9) in either order. The order in which you press these keys will determine the order in which numbers are presented in the problem. When you're ready to begin, press  to start the action!

The problems in the selected table are then displayed in order. (Subtraction tables will not give problems that result in negative answers; division tables won't give a problem whose answer has a remainder.)

At the completion of a table, DataMan will display the score (including ticks of the clock) and a *light show*.

After each table is completed, DataMan will automatically start over with the *next* appropriate table.

Number Guesser

Number Guesser is an educational game of number strategy the whole family will enjoy. To select this activity, first turn DataMan on with the  key, and then press the  key. Then, try to guess a secret number between 9 and 100 that DataMan has selected. As you enter each guess, DataMan provides a

hint by displaying two numbers that the secret number is between.

When the secret number is found, DataMan rewards you with a spectacular "light show" and displays the total number of guesses that were taken. Children can take turns seeing who can find a secret number in the least guesses!

Number Guesser helps to teach the important basic concept of *number betweeness* (the unknown secret number is always *between* the two numbers shown in DataMan's display) and number logic. The strategy involved in getting to the answer in the fewest tries will help build skills in estimation and averaging.

Wipe Out

Wipe Out is a *hot potato* math game for 2 or more players, where the players are racing against DataMan's clock.

This enjoyable activity provides valuable practice in precise, quick thinking, as students race not to get caught when DataMan's clock *wipes out*.

To select this activity, press  , and .

When you're ready to begin, press .

DataMan pops up randomly selected addition problems, which the first player must answer correctly. He or she then quickly passes DataMan to the next player. Each player in turn tries to answer the next problem and pass DataMan on as quickly as possible. The object: Don't get caught when DataMan's display *wipes out*, signaling the end of the game. The player holding DataMan when the *Wipe Out* (a long duration *light show*) occurs is the loser, and is

out of the game. Play continues until only one final winner is left.

The time it takes to *wipe out* is selected at random by DataMan when the **GO** key is pressed, and is known only to him.

Wipe Out is a game players of all ages find exciting, while receiving basic drill in math aimed at improving speed and accuracy.

Force Out

Force Out is a subtraction strategy game for two or more players. To begin, you press  and  . DataMan will display a number (a different one each time) like this: $63 - [] =$. At each turn players press a key from 1 to 9. DataMan will subtract the number entered from the displayed number, display the new result, then flash his lights.

The object of the game: force your opponent to subtract the last number, the one that makes the display value zero. At this point DataMan flashes his display lights, and that player is *Forced Out*.

Force Out is a variation of the game of NIM, which has been played for many years. Playing *Force Out* gives children practice in strategy and in building smaller numbers from larger ones with subtraction.

Missing Number (Box) Problems

In this activity children have fun as they practice problem-solving, where the unknown quantity may be in any of three positions in the problem. DataMan can

provide these problems at two levels of difficulty. Here's how it works:

Begin by pressing  and the **[?]** key.

When this key is first pressed, the box **[]** appears at the right side of the problem, and the level of difficulty is at the *basic* level, level 1.

$$+ \quad [1]$$

Pressing **[?]** again moves the box to the left side of the problem:

$$[] \quad + \quad 1$$

Pressing **[?]** once more moves the box to the middle of the problem.

$$+ \quad [] \quad - \quad 1$$

By pressing the **[?]** button, you or your child can choose where the missing numbers will be in the problems that follow. Depending on the position of the box, children get practice in problems such as:

$$3 + 4 = [?] \quad [?] + 4 = 7 \quad \text{or} \quad 3 + [?] = 7$$

You can select the type of problem you'd like to work on by pressing an operation key:    

For more challenging problems, you can select level 2, by pressing a **[2]** .

To begin play, press **GO** . DataMan will pop up 10 problems one at a time, and you get two tries at each. At the end of 10 problems DataMan will display your score, including the time used to complete the activity (in "ticks" of DataMan's clock), like this:

8	10	30
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Number of right answers *Number of tries* *Time: "ticks" of DataMan's clock*

Then DataMan rewards you with a *light show* that varies with the score.

Appendix

BATTERY INFORMATION

A standard 9-volt *alkaline* battery is recommended for maximum DataMan operating time. If another type of 9-volt battery is used, remove it immediately after it is discharged or when storing DataMan to prevent possible damage from leakage. The battery compartment is easily opened by inserting a small coin in the slot on the back of the unit and gently prying open the cover of the compartment.



LOW BATTERY INDICATION

DataMan will provide approximately 15 hours of actual use when using an alkaline battery. If you observe any of the following indications, the battery should be replaced:

1. Dim display
2. Erratic display
3. Pressing the activity keys has no effect
4. Unusual or inconsistent operation

IN CASE OF DIFFICULTY

1. Check to be sure that DataMan is on.
2. If display fails to light, check for improperly inserted or discharged battery.
3. Review operating instructions to be certain activities are performed correctly.

If none of the above procedures corrects the difficulty, return the calculator PREPAID and INSURED to the applicable SERVICE FACILITY listed on the inside back cover.

Note: The P.O. box number listed for the Lubbock Service Facility is for United States parcel post shipments only. If you desire to use another carrier, the street address is:

Texas Instruments Incorporated
2305 University Avenue
Lubbock, TX 79415

For your protection, the DataMan must be sent insured; Texas Instruments cannot assume any responsibility for loss of or damage to uninsured shipments. Please include information on the difficulty experienced with the unit, as well as return address information including name, address, city, state, and zip code. The shipment should be carefully packaged and adequately protected against shock and rough handling.

CALCULATOR EXCHANGE CENTERS

If your DataMan requires service, instead of returning the unit to a service facility for repair, you may elect to exchange it for a factory-rebuilt unit of the SAME MODEL at one of the exchange centers which have been established across the United States. A \$3.00 charge will be made by the exchange center for in-warranty exchanges. Out-of-warranty exchanges will be charged at the rates in effect at the time of the exchange. Please call the Consumer Relations Department for further details and the location of the nearest exchange center.

IF YOU NEED SERVICE INFORMATION

If you need service information about DataMan, write the Consumer Relations Department at:

Texas Instruments Incorporated
P.O. Box 53
Lubbock, TX 79408

or call Consumer Relations at 800-858-1802 (toll-free within all contiguous United States except Texas) or 800-692-1353 (toll-free within Texas). If outside contiguous United States call 806-747-3841. (We regret that we cannot accept collect calls at this number.)

One-Year Limited Warranty

WARRANTEE

This Texas Instruments electronic calculator warranty extends to the original purchaser of the Calculator.

WARRANTY DURATION

This Texas Instruments electronic calculator is warranted to the original purchaser for a period of one (1) year from the original purchase date.

WARRANTY COVERAGE

This Texas Instruments electronic calculator is warranted against defective materials or workmanship. **THIS WARRANTY IS VOID IF:** (i) THE CALCULATOR HAS BEEN DAMAGED BY ACCIDENT OR UNREASONABLE USE, NEGLECT, IMPROPER SERVICE OR OTHER CAUSES NOT ARISING OUT OF DEFECTS IN MATERIALS OR WORKMANSHIP, (ii) THE SERIAL NUMBER HAS BEEN ALTERED OR DEFACED.

WARRANTY PERFORMANCE

During the above one (1) year warranty period your calculator will either be repaired or replaced with a reconditioned model of an equivalent quality (at TI's option) when the calculator is returned, postage prepaid and insured to a Texas Instruments Service facility listed below. In the event of replacement with a reconditioned model, the replacement unit will continue the warranty of the original calculator or 90 days, whichever is longer. Other than the postage and insurance requirement, no charge will be made for such repair, adjustment, and/or replacement.

WARRANTY DISCLAIMERS

ANY IMPLIED WARRANTIES ARISING OUT OF THIS SALE, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE ABOVE ONE (1) YEAR PERIOD. TEXAS INSTRUMENTS SHALL NOT BE LIABLE FOR LOSS OF USE OF THE CALCULATOR OR OTHER INCIDENTAL OR CONSEQUENTIAL COSTS, EXPENSES, OR DAMAGES INCURRED BY THE PURCHASER.

Some states do not allow the exclusion or limitation of implied warranties or consequential damages, so the above limitations or exclusions may not apply to you.

LEGAL REMEDIES

This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

TEXAS INSTRUMENTS CONSUMER SERVICE FACILITIES

Texas Instruments Service Facility Texas Instruments Service Facility
P.O. Box 2500 41 S. Elley Road
Lubbock, TX 79408 Richond Hill, Ontario, Canada

Consumers in California and Oregon may contact the following Texas Instruments offices for additional assistance or information:

Texas Instruments Consumer Service 3186 Airway Drive, Bldg. K Costa Mesa, CA 92626 (714) 540-719	Texas Instruments Consumer Service 10700 Southwest Beaverton Highway Portland, OR 97005, (503) 643-6758
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