DataTasks™
for
Exploring Math With DataMan™

Another in the series of calculator related mathematics education materials from Texas Instruments

LEARNING CENTER

DataTasks™ for *Exploring Math With DataMan*™

Developed by the Staff of the
Texas Instruments Learning Center

Editor:
Barbara B. Irvin, Staff Consultant

Resource Person:
Dr. Gary G. Bitter
Professor of Mathematics Education
Arizona State University, Tempe, Arizona

Manager of Educational Products Development
Gerald Luecke

With contributions by:
Dr. Ralph A. Oliva, Educational Software Director
Bill Kernahan, Educational Product Marketing Manager
Alecia Helton, Staff Member

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Artwork and design by:
Schenck, Plunk & Deason

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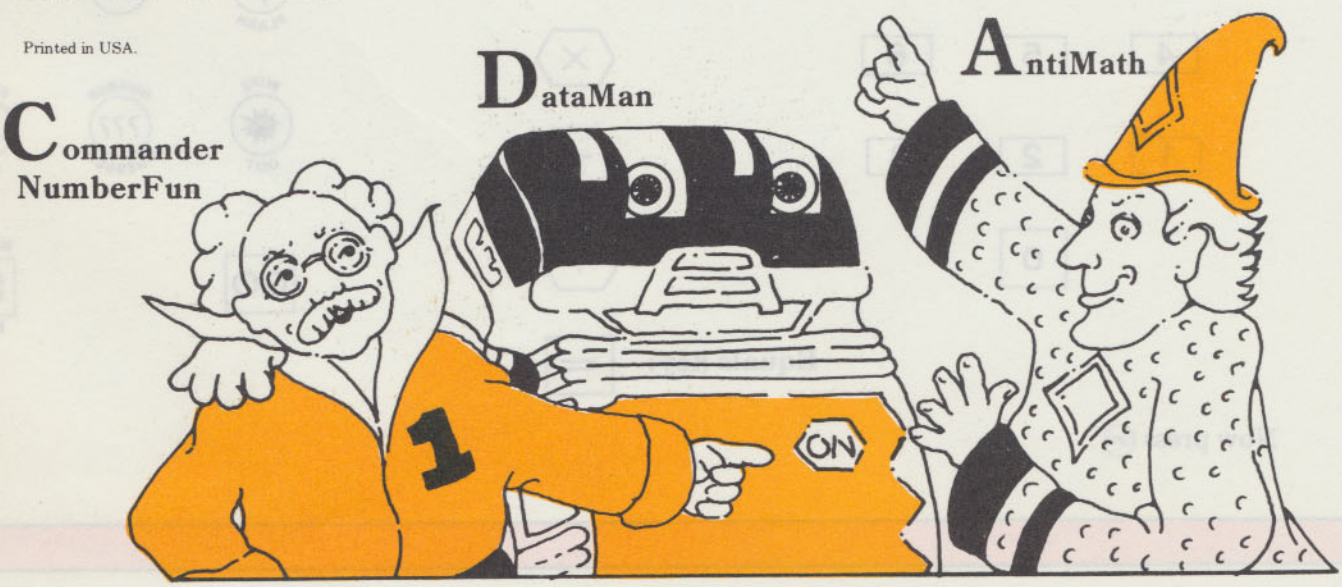
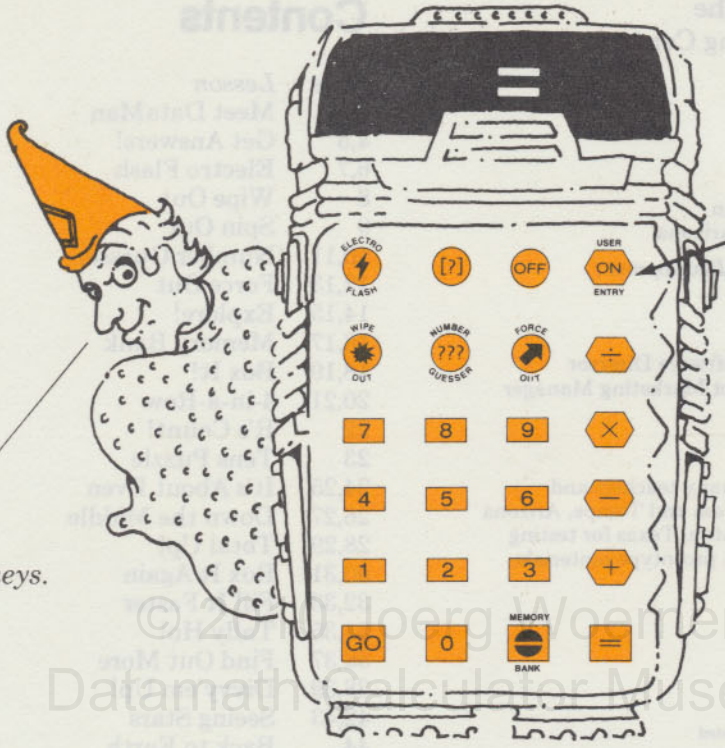
Contents

The Characters:



MEET DATAMAN



To turn DataMan on, press the ON key.

DataMan is on when you see an equals sign (=).

Press 8 .
Press + .
Press more keys.

DataMan has number keys, operation keys, and special keys.
Find them. Press some of them. See what they do.

Number keys:

7 8 9

4 5 6

1 2 3

0

Operation keys:

÷ × − +

Equals key: =

Special keys:

ELECTRO FLASH

[?]

WIPE OUT

NUMBER ??? GUESSER

FORCE OUT

GO

MEMORY BANK

Now press OFF .

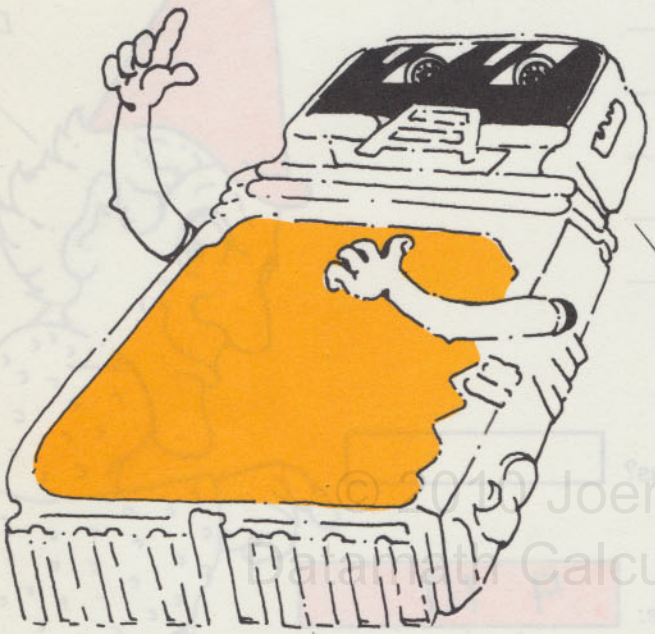
Try out DataMan:

Press ON.
Press 4 + 5 =.

What do you see? _____

What is the answer for 4+5? _____

What happened after you pressed 9? _____



When you give a correct answer, you will get a "Bull's Eye."

Try another problem:

Press 6.
Hee! Hee!

Press ON.
Press 1 4 − 9 =.

What happened after you pressed 6? _____

When you give a wrong answer, you will get: EEE

Then you will get to try again.

What is 14−9?_____

If you give a wrong answer the second time, you will get EEE's again and then the correct answer.

Important: When you finish with DataMan, press OFF. That saves the battery.

GET ANSWERS!

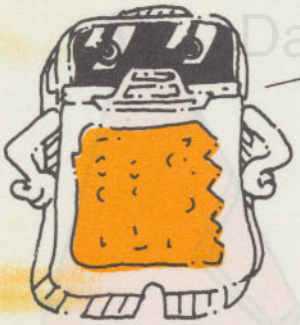
Try these problems:

1. 7+8=_____
   Press [7] [+] [8] [=]
2. 6+5=_____
3. 9+4=_____
4. 9+9=_____
5. 6+7=_____
6. 8+4=_____
7. 7+5=_____
8. 7+9=_____
9. 8+8=_____
10. 9+8=_____

Do them fast

Now check your answers with DataMan.

What do you see after doing these 10 problems?



After 10 problems, I will give you a score: 9 10

Number correct \ Number of problems

Did your score match DataMan's score?_____

Try these problems on DataMan. Record your scores.

11. 18−9=_____
12. 13−4=_____
13. 16−9=_____
14. 8−0=_____
15. 14−9=_____
16. 15−6=_____
17. 13−7=_____
18. 9−9=_____
19. 13−5=_____
20. 17−8=_____
21. 3×6=_____
22. 2×7=_____
23. 4×5=_____
24. 5×6=_____
25. 7×7=_____
26. 5×8=_____
27. 9×7=_____
28. 8×6=_____
29. 7×8=_____
30. 6×9=_____

Score: _____ Score: _____

Now, let's see how smart you really are. Try these!

1. $26+7=$_____ **6.** $55+9=$_____

2. $35-8=$_____ **7.** $80-3=$_____

3. $40-6=$_____ **8.** $25+7=$_____

4. $61+9=$_____ **9.** $76-8=$_____

5. $73-4=$_____ **10.** $91+9=$_____

Score:

These will get you for sure! Try them.

11. $\begin{array}{r} 27 \\ +32 \\ \hline \end{array}$ Press: [2] [7] [+] [3] [2] [=]

12. $\begin{array}{r} 56 \\ -33 \\ \hline \end{array}$ **13.** $\begin{array}{r} 21 \\ +29 \\ \hline \end{array}$ **14.** $\begin{array}{r} 38 \\ -29 \\ \hline \end{array}$

15. $\begin{array}{r} 63 \\ -14 \\ \hline \end{array}$ **16.** $\begin{array}{r} 46 \\ +34 \\ \hline \end{array}$ **17.** $\begin{array}{r} 38 \\ +12 \\ \hline \end{array}$ **18.** $\begin{array}{r} 70 \\ -17 \\ \hline \end{array}$ **19.** $\begin{array}{r} 35 \\ +45 \\ \hline \end{array}$ **20.** $\begin{array}{r} 61 \\ -35 \\ \hline \end{array}$

Score:

Now try these division problems.

21. $15 \div 3=$_____
Press [1] [5] [÷] [3] [=]

22. $24 \div 6=$_____

23. $35 \div 7=$_____

24. $6\overline{)48}=$_____
Press [4] [8] [÷] [6] [=]

25. $9\overline{)45}=$_____

26. $64 \div 8=$_____

27. $81 \div 9=$_____

28. $5\overline{)40}=$_____

29. $37 \div 9=$_____

30. $8\overline{)66}=$_____

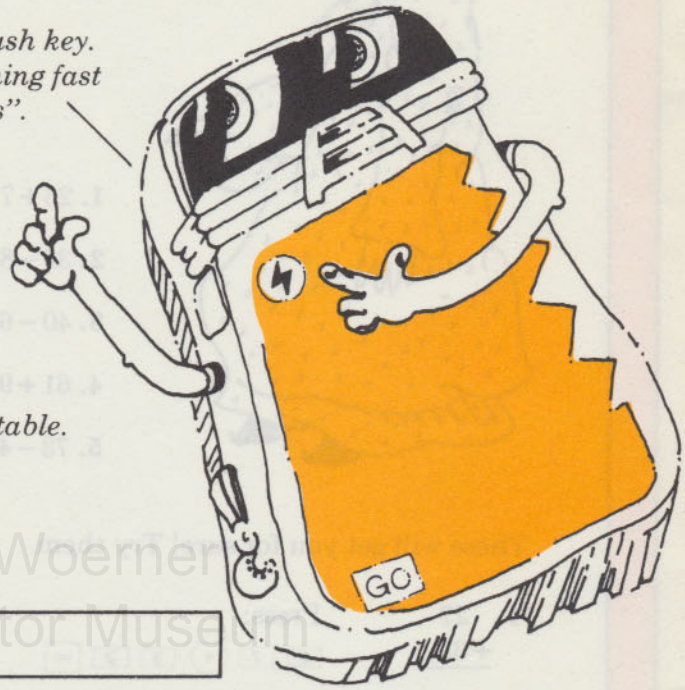
For 29 and 30, you give the quotient and I'll give the remainder.

Score:

Did you forget anything? . . . Press [OFF].

ELECTRO FLASH!

This is the Electro Flash key. It will make you lightning fast with the "Math Tables".



Press ON.

Press Electro Flash key.

Pick the math table you want to practice.

Try the "three times" table.

Press 3 and ×.

Ready? . . . Press GO.

What do you see? _____

Practice the "three times" math table:

1. 3×0=_____
2. 3×1=_____
3. 3×2=_____
4. 3×3=_____
5. 3×4=_____
6. 3×5=_____
7. 3×6=_____
8. 3×7=_____
9. 3×8=_____
10. 3×9=_____

After doing each table, you will get a score and time.

Score and time: _____

Try the "three times" table again.
Can you do it faster this time? _____

Score and time: _____

GO

Try the "nine minus" table.
Press ON ⚡ 9 − *and* GO.

1. 9 − 0 = _____
2. 9 − 1 = _____
3. 9 − 2 = _____
4. 9 − 3 = _____
5. 9 − 4 = _____
6. 9 − 5 = _____
7. 9 − 6 = _____
8. 9 − 7 = _____
9. 9 − 8 = _____
10. 9 − 9 = _____

Score and time: _____

Try these math tables. Fill in each ⬡, ◯, and □.
Record your score and time.

Score and time:

11. "seven plus" Press ⬡ ON ⚡ □ ⬡ + ⬡ GO □ _____

12. "six times" Press ⬡ ON ◯ 6 ⬡ □ _____

13. "eight minus" Press ⬡ ⚡ □ ⬡ GO _____

14. "zero plus" Press ⬡ ⚡ 0 ⬡ □ _____

15. "zero times" Press ⬡ ◯ □ ⬡ × ⬡ □ _____

Try the "nine divide" table. Fill in only the problems DataMan gives to you.

16. 9 ÷ 0 = _____
17. 9 ÷ 1 = _____
18. 9 ÷ 2 = _____
19. 9 ÷ 3 = _____
20. 9 ÷ 4 = _____
21. 9 ÷ 5 = _____
22. 9 ÷ 6 = _____
23. 9 ÷ 7 = _____
24. 9 ÷ 8 = _____
25. 9 ÷ 9 = _____

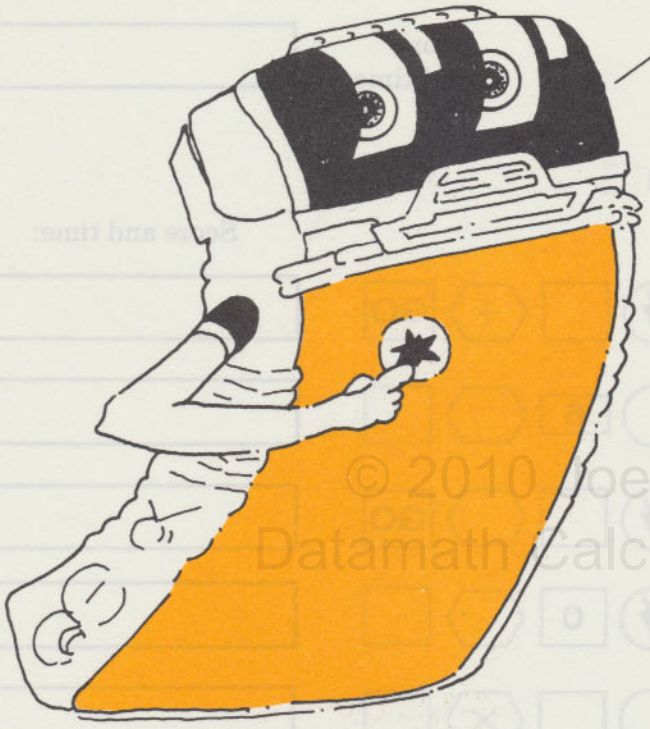
Score and time: _____

Why do you think DataMan did not give you all of the problems shown above? _____

Save the battery! . . . Press OFF.

WIPE OUT

TEST YOUR SKILL! BETTER YOUR SPEED!



Wipe Out is a race against my timer for you and your friends. Try it!

YOU WILL NEED:
DataMan
Two or more players

HOW TO PLAY:
Press ON.

Press the Wipe Out key.

When it is your turn, answer the problem on DataMan's display as fast as you can.

Quickly pass DataMan to the next player.

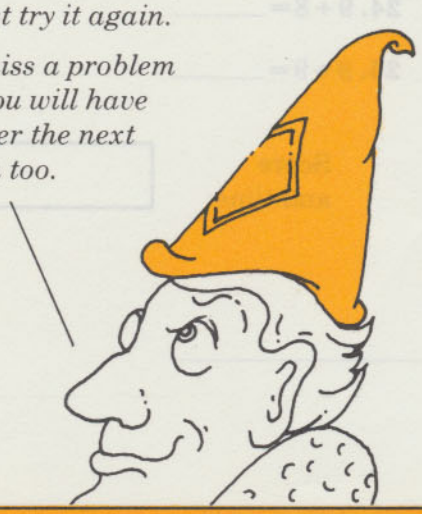
When time runs out, you will see a crazy light show. If it runs out when it is your turn, you lose!

HOW TO WIN:
The only player left is the winner!

Other rules:

If you miss a problem, you must try it again.

If you miss a problem twice, you will have to answer the next problem too.



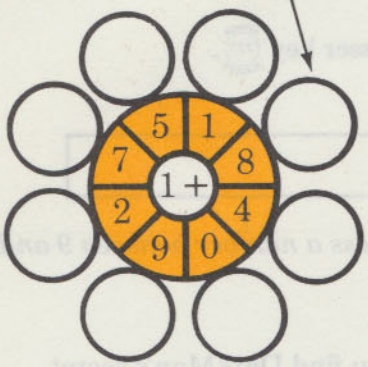
READY? . . . Press GO.

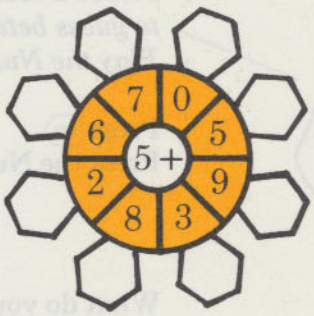
Play Wipe Out at least three times.

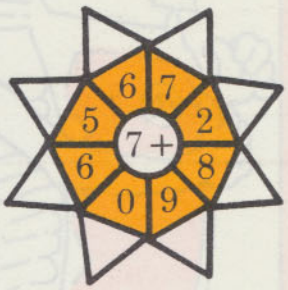
Don't wipe out DataMan! Press OFF.

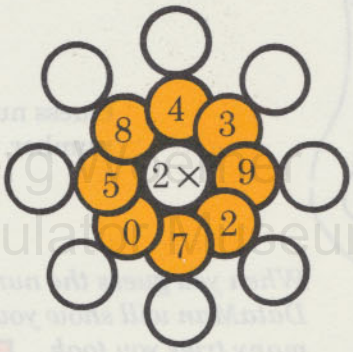
SPIN OUT

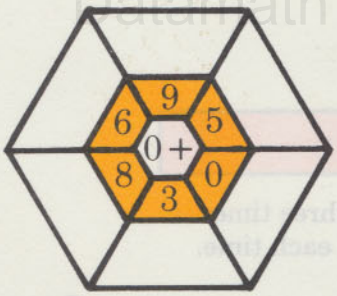
Fill in each spinner.
For example, for this press [1] [+] [8] [=] .



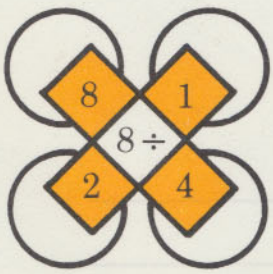


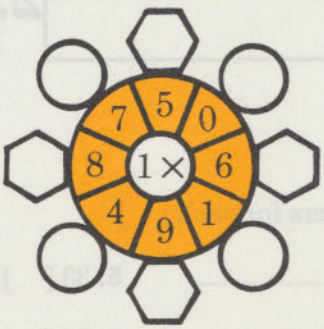


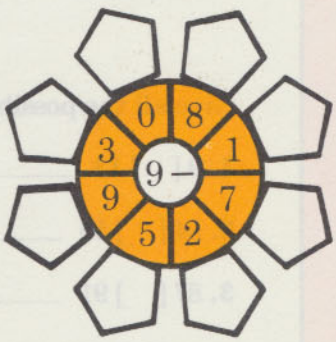




Check your answers with DataMan's Electro Flash key ⚡.

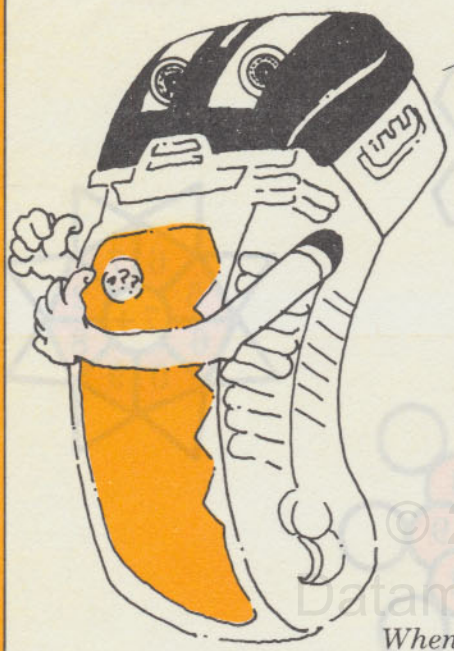






Flash OFF please.

NUMBER GUESSER



I have a secret number for you to guess between 9 and 100. Play the Number Guesser game.

Press ON.
Press the Number Guesser key ???.

What do you see? [ ]

Guess a number between 9 and 100.

Guess numbers until you find DataMan's secret number. (It's a different one each time!)

When you guess the number, DataMan will show you how many tries you took. [ ]

Play the Number Guesser game three times.
Show how many tries it took you each time.

1. [ ] **2.** [ ] **3.** [ ]

Give all the possible numbers for each [ ].

1. 9 [ ] 13 _____

2. 54 [ ] 56 _____

3. 87 [ ] 91 _____

4. 67 [ ] 67 _____

5. 33 [ ] 40 _____

6. 75 [ ] 84 _____

7. 88 [ ] 100 _____

8. 9 [ ] 30 _____

Pretend you are playing the Number Guesser game:

A. What **if** you see 87 [ ] 100

and you guess 83? _____

Is 87 83 100 correct? _____

B. What **if** you see 9 [ ] 25

and you guess 7? _____

Is 9 7 25 correct? _____

C. What **if** you see 56 [ ] 100

and you guess 70? _____ or _____

Is 56 70 100 correct? _____

Play the Number Guesser game a few more times.

Can you put these sets of numbers in increasing order? For example, for 23, 30, 27 the order is 23, 27, 30.

1. 43, 15, 47 _____

2. 15, 17, 100 _____

3. 85, 82, 80 _____

4. 60, 9, 90 _____

5. 9, 56, 53 _____

6. 95, 50, 100 _____

7. 27, 72, 20 _____

8. 39, 33, 93 _____

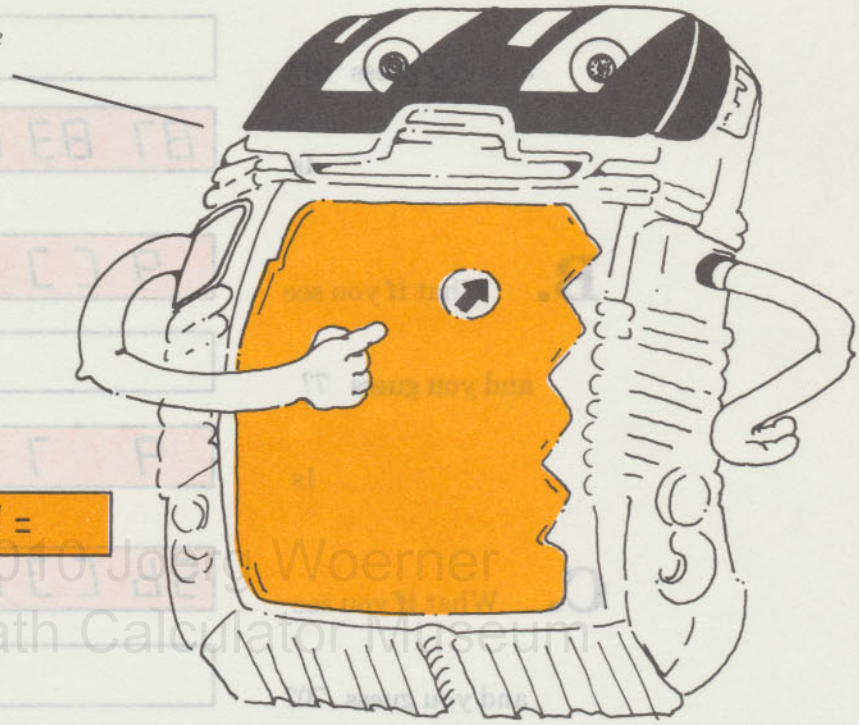
9. 10, 46, 37 _____

10. 66, 67, 65 _____

Guess what! . . . Press OFF.

FORCE OUT

Force Out is a subtraction game for two players. Try it.



YOU WILL NEED:
DataMan
Two players

HOW TO PLAY:

Press ON.

Press the Force Out key.

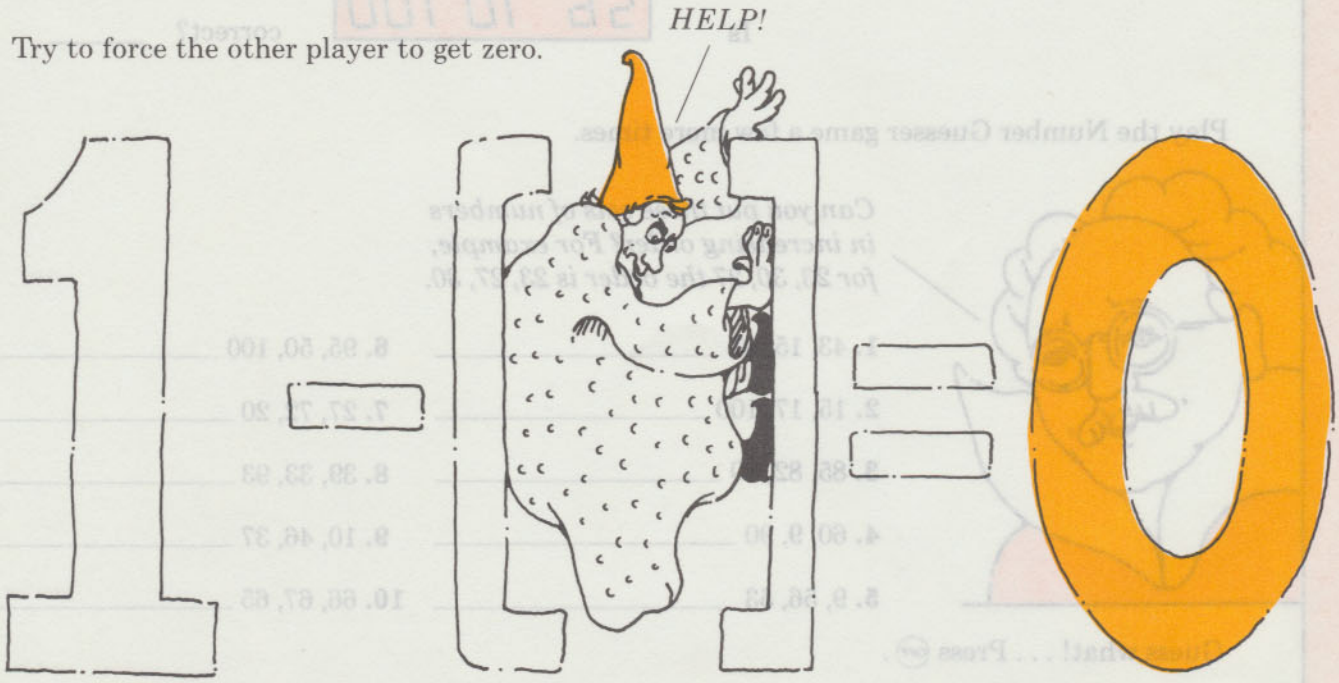
DataMan will choose a number to start the game and show it to you like this: 32 - [ ] =

When it is your turn, subtract a number 1, 2, 3, 4, 5, 6, 7, 8, or 9.

Keep taking turns.

HOW TO WIN:

Try to force the other player to get zero.



$-9 = 28$

Play the Force Out game again.
Try some different rules.

Press ON and ↗.

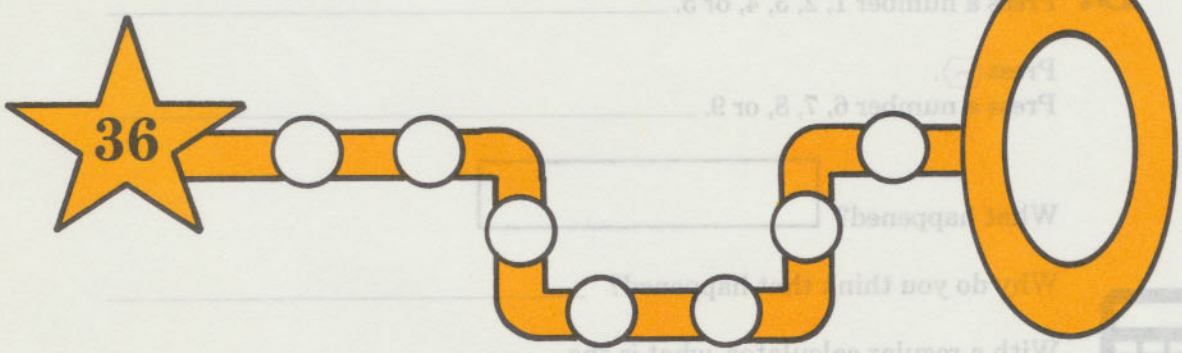
Subtract only 1, 3, 5, 7, or 9.

Subtract only 5, 6, 7, 8, or 9.

Subtract a number from 1 through 9 using each number only once by each player.

Which way lets you win most of the time? _____

Figure out how to get from 36 to zero.
Use any of the rules above.



Force yourself . . . press OFF.

EXPLORE!

Try these problems with DataMan.
Explore what DataMan can do.

A. Press ON.
Press a number 1-9. _____

Press ON.
Press a number 10-99. _____

Press ON.
Press a number 100-999. _____

What happened? _____

What is the largest number
you can put into DataMan? _____

B. Press ON.
Press a number 1, 2, 3, 4, or 5. _____

Press −.
Press a number 6, 7, 8, or 9. _____

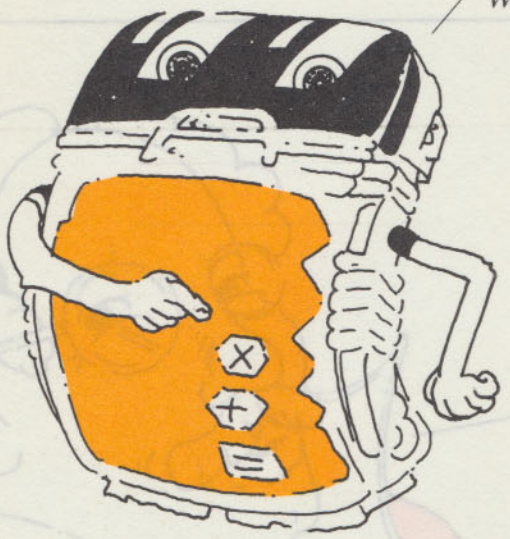
What happened? _____

Why do you think that happened? _____

With a regular calculator, what is the
largest number you can put into it? _____

Can you get an answer for problem B? _____ What is it? _____

Try to find big answers.
Watch out!



C. Press ON.
Make up an addition problem. _____

Find its answer. _____

Make up another addition problem and find its answer. _____

Do this many times until you find the largest answer you can find.

What is the addition problem and answer?

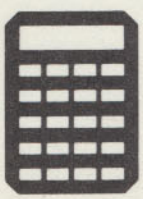
D. Press ON.
Make up a multiplication problem. _____

Find its answer. _____

Make up several multiplication problems and find their answers.

TRY 86×9.

What is the largest answer to a multiplication problem you can get? _____



If you try problems C and D on a regular calculator:

Show an addition problem that would give you the largest answer. _____

Show a multiplication problem. _____

MEMORY BANK

You can put up to 10 problems into DataMan's Memory Bank. Then practice them. Here's how:

Press ON.

Put in problem 25 + 6 =.
Press the Memory Bank key (MEMORY / BANK).

Put in 45 − 8 =.
Press (MEMORY / BANK).

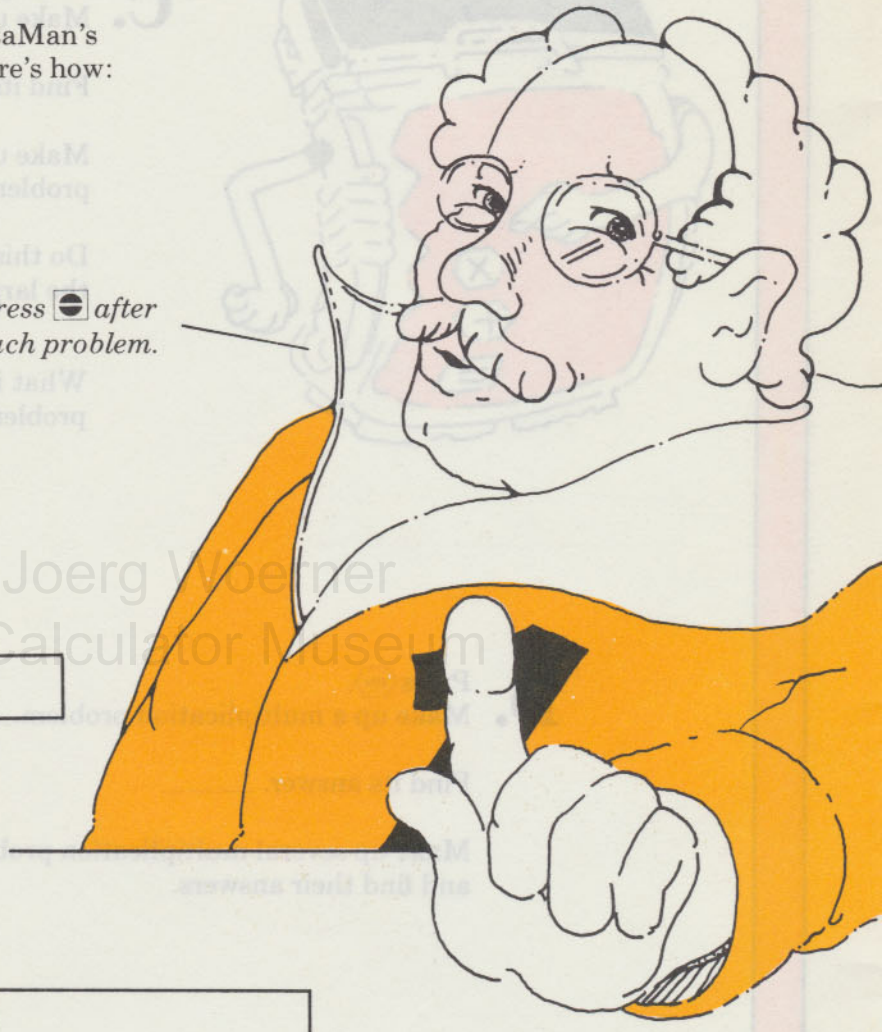
Press (MEMORY / BANK) after each problem.

Put in 23 × 3 =.
Press (MEMORY / BANK).

Put in 54 ÷ 9 =.
Press (MEMORY / BANK).

READY? . . . Press GO.

What do you see? _____



Do these problems.

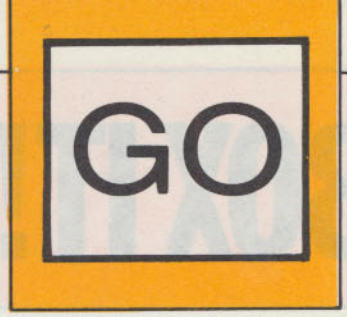
1. 25 + 6 = _____
2. 45 − 8 = _____
3. 23 × 3 = _____
4. 54 ÷ 9 = _____

Score and time: _____

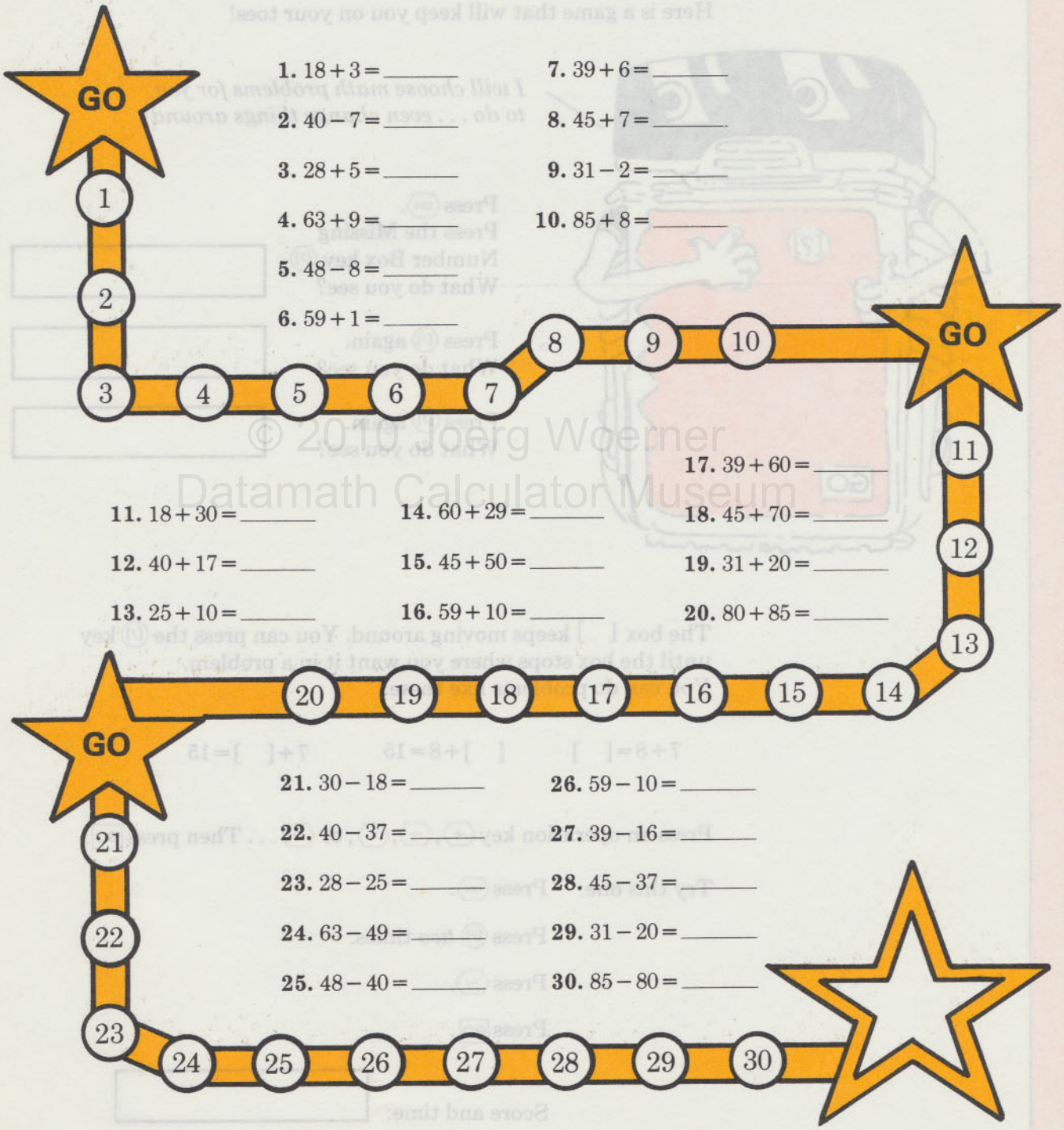
Try them again. Press GO.
Did you get a better score and time? _____

Reminder: The problems in Memory Bank will be erased if you press ON, OFF, or any game key.

STARMATH RACE



. . . a game for two players.
Take turns putting each set of 10 problems in Memory Bank. You and a friend can try to see who gets the most correct answers. Use markers to keep track of the problems you you get correct.

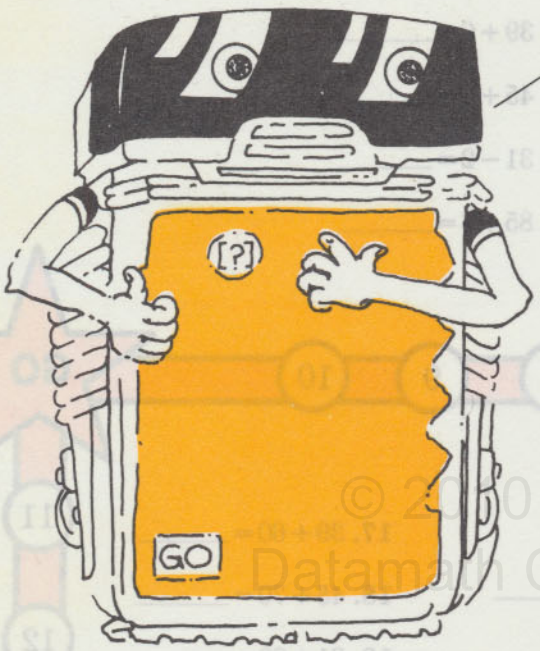


1. 18 + 3 = _____
2. 40 − 7 = _____
3. 28 + 5 = _____
4. 63 + 9 = _____
5. 48 − 8 = _____
6. 59 + 1 = _____
7. 39 + 6 = _____
8. 45 + 7 = _____
9. 31 − 2 = _____
10. 85 + 8 = _____

11. 18 + 30 = _____
12. 40 + 17 = _____
13. 25 + 10 = _____
14. 60 + 29 = _____
15. 45 + 50 = _____
16. 59 + 10 = _____
17. 39 + 60 = _____
18. 45 + 70 = _____
19. 31 + 20 = _____
20. 80 + 85 = _____

21. 30 − 18 = _____
22. 40 − 37 = _____
23. 28 − 25 = _____
24. 63 − 49 = _____
25. 48 − 40 = _____
26. 59 − 10 = _____
27. 39 − 16 = _____
28. 45 − 37 = _____
29. 31 − 20 = _____
30. 85 − 80 = _____

BOX IT!



Here is a game that will keep you on your toes!

I will choose math problems for you to do . . . even change things around!

Press ⟨ON⟩.
Press the Missing Number Box key ⟨[?]⟩.
What do you see? ____

Press ⟨[?]⟩ again.
What do you see? ____

Press ⟨[?]⟩ again.
What do you see? ____

The box [ ] keeps moving around. You can press the ⟨[?]⟩ key until the box stops where you want it in a problem.
You can do problems like these:

7+8=[ ] [ ]+8=15 7+[ ]=15

Press an operation key ⟨+⟩, ⟨−⟩, ⟨×⟩, or ⟨÷⟩ . . . Then press GO.

Try this one: Press ⟨ON⟩.

Press ⟨[?]⟩ *two* times.

Press ⟨−⟩.

Press GO.

Score and time: ____

GO

Try some addition problems like 7 + [ ] = 15.
Write down the problems and answer them.

Press ON.
Press [?] *three* times.
Press +.
Press GO.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Press GO again. Do 10 more addition problems.

Score and time: ☐

Are they the same 10 problems? _____

Fill in each box and blank.

Try some [ ] × 3 = 12 problems.

Press ON.

Press [?] _____ times.

Press ⬡.

Press ☐.

Score and time: ☐

Now try some 12 ÷ [ ] = 3 problems.

Press ON.

Press [?] _____ times.

Press ⬡.

Press ☐.

Score and time: ☐

[?] . . . [?] . . . [?] . . . Press OFF.

4-IN-A-ROW

HOW TO PLAY: Press [ON] and [?] *three* times.

Then press [+] and [GO].

Match DataMan's problem to the grid and then write in the answer.

Example: 2+[ ]=7

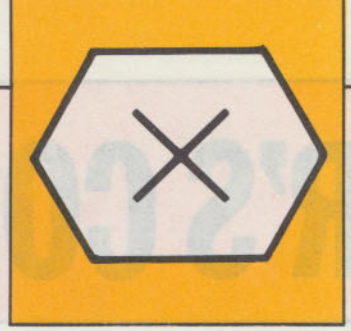
Write the answer 7 where 2 and 5 meet. That would be (2,5) on the grid.

+	3	0	4	5	1	
0						
1						
2				7		
3						

Continue until you have four answers in a row ("4-in-a-row") across, down, or diagonally.

Let's see . . .
2+[ ]=7
is just like
7−2=[ ].

+	3	0	4	5	1	8	9	7	6	2
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										



Now try the "4-in-a-Row" game with multiplication.
Press ON, ? *three* times, ×, and then GO

×	3	0	4	6	2	1	8	9	5	7
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										

Playing this game can help you do the problems below.

Try these problems. Write your answer in each [ ].

1. If $6 \times [\_\_\_\_] = 30$, then $30 \div 6 = [\_\_\_\_]$.
2. If $5 \times [\_\_\_\_] = 45$, then $45 \div 5 = [\_\_\_\_]$.
3. If $7 \times [\_\_\_\_] = 56$, then $56 \div 7 = [\_\_\_\_]$.
4. If $6 \times [\_\_\_\_] = 54$, then $54 \div 6 = [\_\_\_\_]$.
5. If $8 \times [\_\_\_\_] = 72$, then $72 \div 8 = [\_\_\_\_]$.

Now try this: Press ON, ? *one* time, ÷ and GO .

Do the problems. Give your score and time:

R'S COUNT!

Fill in *only the remainder* in each small circle ○ of each problem.

1	2	3	4	5
15 ÷ 5 = ○	16 ÷ 8 = ○	18 ÷ 3 = ○	21 ÷ 7 = ○	42 ÷ 7 = ○
6	**7**	**8**	**9**	**10**
24 ÷ 4 = ○	63 ÷ 9 = ○	45 ÷ 5 = ○	27 ÷ 3 = ○	54 ÷ 9 = ○

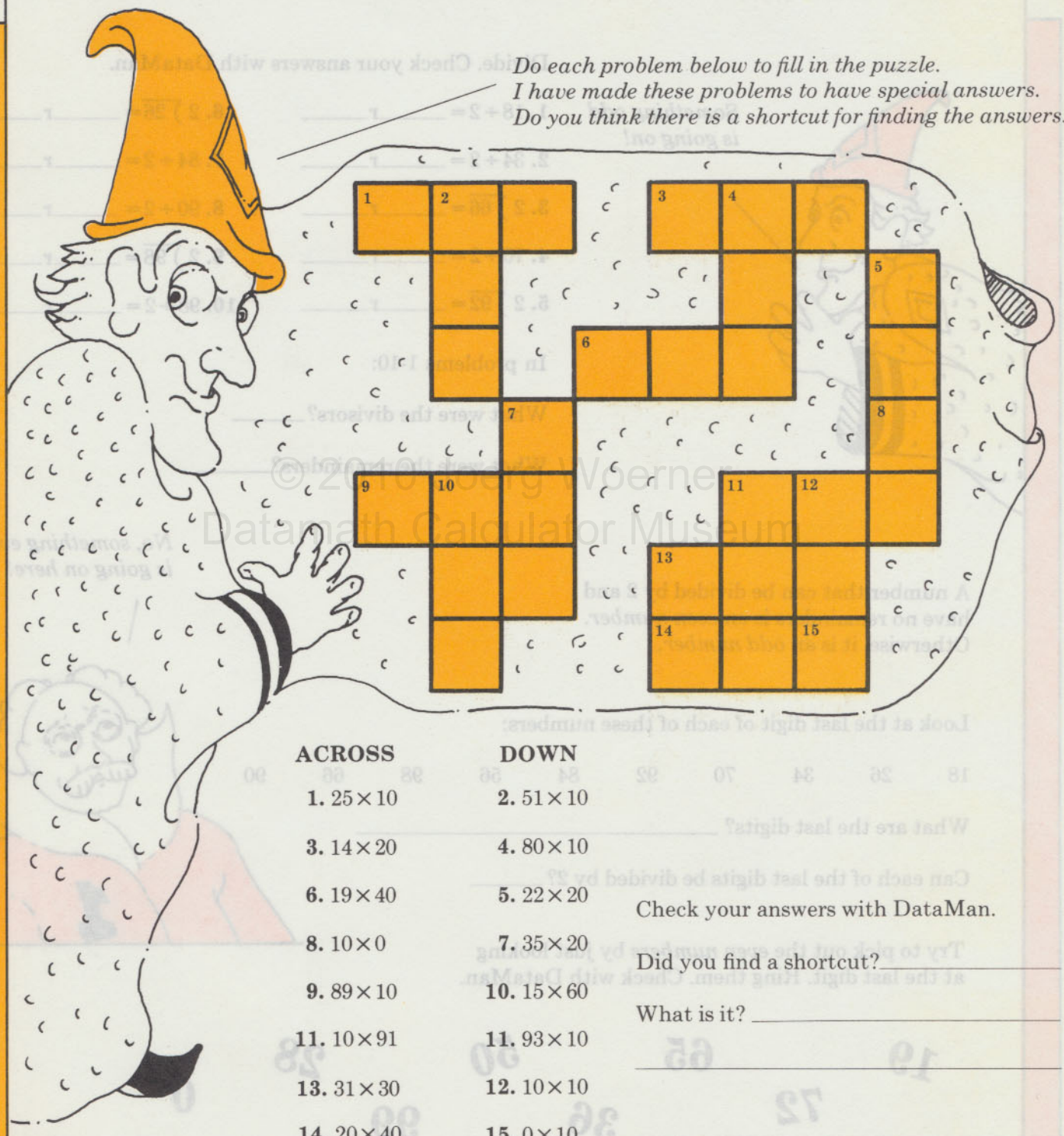
Check your answers with DataMan. Score: ☐

Now fill in the remainders in each small circle for each of these problems.

11	12	13	14	15
33 ÷ 8 = ○	38 ÷ 9 = ○	74 ÷ 8 = ○	32 ÷ 5 = ○	24 ÷ 10 = ○
16	**17**	**18**	**19**	**20**
98 ÷ 40 = ○	55 ÷ 27 = ○	47 ÷ 11 = ○	66 ÷ 15 = ○	25 ÷ 51 = ○

Check your answers with DataMan. Score: ☐

TENS PUZZLE



Do each problem below to fill in the puzzle.
I have made these problems to have special answers.
Do you think there is a shortcut for finding the answers.

ACROSS

1. 25×10

3. 14×20

6. 19×40

8. 10×0

9. 89×10

11. 10×91

13. 31×30

14. 20×40

DOWN

2. 51×10

4. 80×10

5. 22×20

7. 35×20

10. 15×60

11. 93×10

12. 10×10

15. 0×10

Check your answers with DataMan.

Did you find a shortcut? _____

What is it? _____

_____

_____

IT'S ABOUT EVEN

Something odd is going on!

Divide. Check your answers with DataMan.

1. $18 \div 2 =$ ____ r ____
2. $34 \div 2 =$ ____ r ____
3. $2\overline{)66} =$ ____ r ____
4. $70 \div 2 =$ ____ r ____
5. $2\overline{)92} =$ ____ r ____
6. $2\overline{)26} =$ ____ r ____
7. $84 \div 2 =$ ____ r ____
8. $90 \div 2 =$ ____ r ____
9. $2\overline{)98} =$ ____ r ____
10. $98 \div 2 =$ ____ r ____

In problems 1-10:

What were the divisors? _____

What were the remainders? _____

No, something even is going on here!

A number that can be divided by 2 and have no remainders is an *even number*. Otherwise, it is an *odd number*.

Look at the last digit of each of these numbers:

18 26 34 70 92 84 56 98 66 90

What are the last digits? _____

Can each of the last digits be divided by 2? _____

Try to pick out the *even numbers* by just looking at the last digit. Ring them. Check with DataMan.

19 65 50 28 72 36 99 0

Now try to pick out
the even number here.

3,332

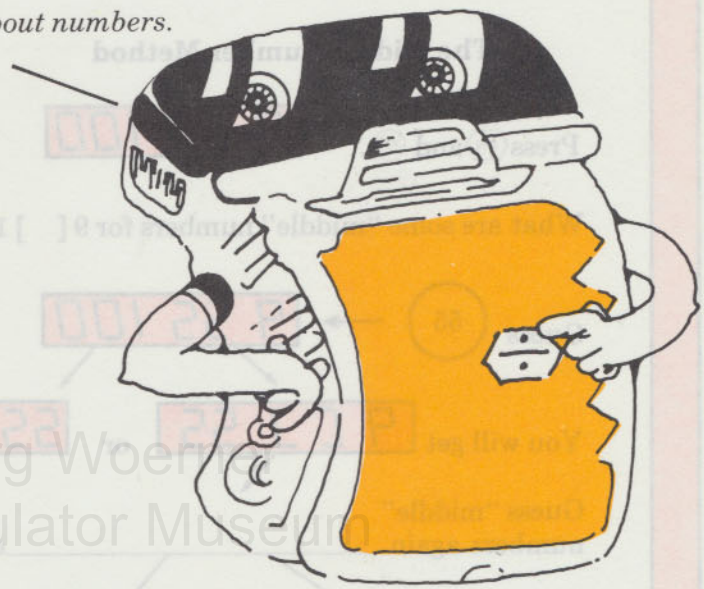
124 500 605 950 401,000

1,000,000

If unsure, check with a
regular calculator.

28,056

It's nice to know secrets about numbers.
Try to learn some more.



Look at these numbers very carefully.

27 72 69 96 84 48

Can you divide each of those
numbers by 3 without having
a remainder? (Check with DataMan) _____

42, 54, 90, 165, 471, and 207
can also be divided by 3.
Can you find the secret?

Look at the sum of the digits of these numbers:

27 2+7=9

96 9+6=15

84 8+4=_____

165 1+6+5=12

471 4+7+1=_____

207 2+0+7=_____

The sum of the digits can be divided by 3!

Ring the numbers that are *even*.
Crossout the numbers that can be *divided by 3*.

62 87 101 92 2,001

90 42 256 524

Psssst . . .
Use DataMan or a regular calculator to check.

DOWN THE MIDDLE

Try the Number Guesser game again.
Did you discover a strategy that time?
If not, try this one:

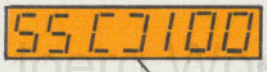
The Middle Number Method

Press ON and ???.

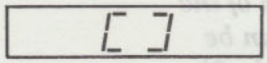
What are some "middle" numbers for 9 [ ] 100? _____

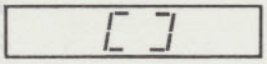
Guess 55 → 

You will get 

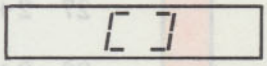
or 

Guess "middle" numbers again. _____ or _____



or 

or 



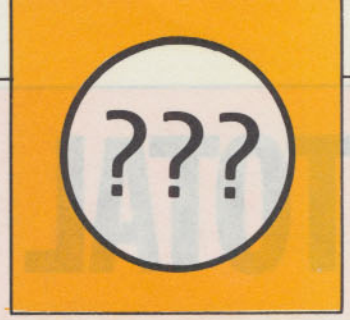
Continue until you guess the number.

Try to find numbers halfway between the two given numbers.

Try this method many times.

Here's space for you to try it.

Does this method help you guess the secret number faster? _____



Here is a way to guess the "middle" number:

What if DataMan showed this: 20 ? 34

The numbers between 20 and 34 are:

21 22 23 24 25 26 27 28 29 30 31 32 33

Which is the "middle" number? _____

What if DataMan showed this: 20 ? 76

There are many numbers between 20 and 76!

Here is an easier way to find the middle number.

For 20 ? 76

First find 20 + 76 = _____

Then find 96 ÷ 2 = _____ ← *This is the middle number.*

Check to see if your answer is correct.

List all the numbers between 20 and 76. Which is the "middle" number?

_____

_____

Give the "middle" number for each pair.

1. 25_____27

2. 20_____40

3. 20_____30

4. 10_____50

5. 9_____21

6. 32_____60

7. 9_____39

8. 34_____60

9. 10_____74

10. 30_____66

11. 45_____51

12. 15_____75

13. 15_____29

14. 9_____89

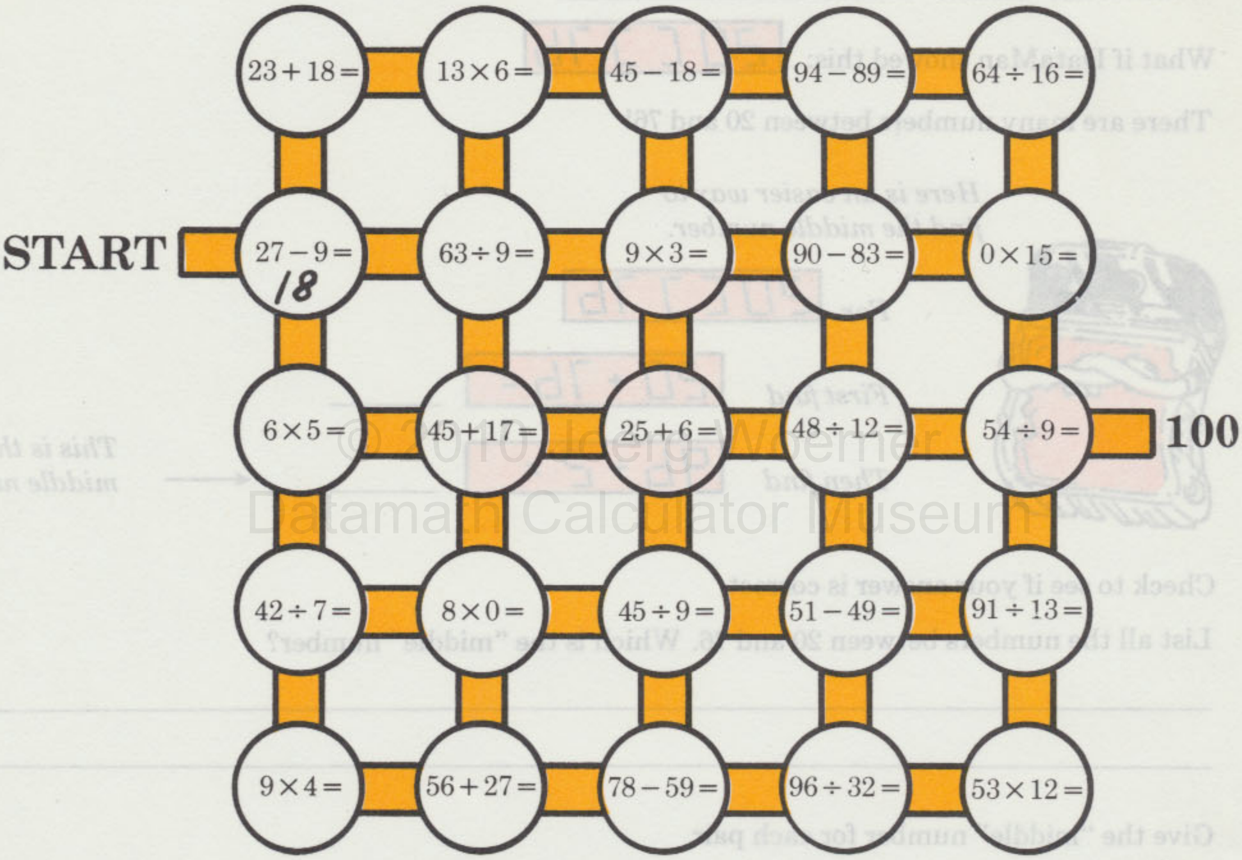
15. 19_____77

Play the Number Guesser game again. Does the "middle number" method help you guess the number faster?

Oops . . . forget anything . . .? . . . Press OFF.

TOTAL UP!

Use DataMan to find each answer. Then find a path from START to 100. (All the answers along the path must add up to 100.)



Record your path.

18 + _____ = _____   _____ + _____ = _____

_____ + _____ = _____   _____ + _____ = _____

_____ + _____ = _____   _____ + _____ = _____

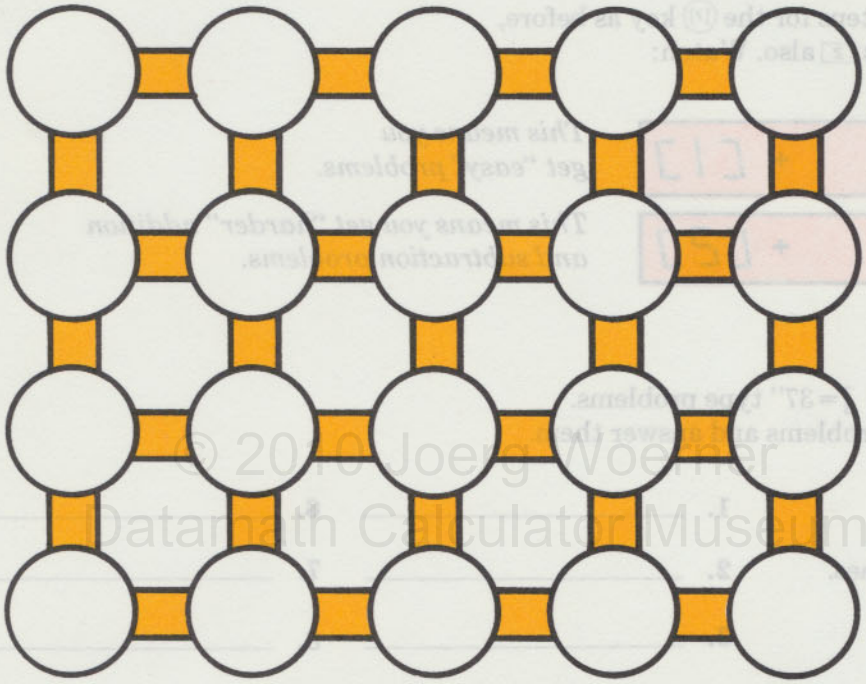
_____ + _____ = _____   _____ + _____ = _____

_____ + _____ = _____   _____ + _____ = _____

_____ + _____ = _____   _____ + _____ = _____

Make up a puzzle for a friend.

START



FINISH

Record the path.

____ + ____ = ____	____ + ____ = ____
____ + ____ = ____	____ + ____ = ____
____ + ____ = ____	____ + ____ = ____
____ + ____ = ____	____ + ____ = ____
____ + ____ = ____	____ + ____ = ____
____ + ____ = ____	____ + ____ = ____

End of your path? . . . Press OFF.

BOX IT AGAIN

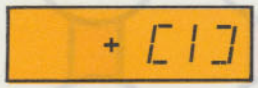
To be lightning quick with math you should do "hard" problems too.

Follow the same steps for the [?] key as before, but this time press [2] also. Watch:

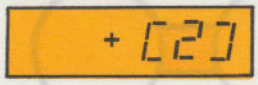
Press [ON].

Press [?].

Now press [2].



This means you get "easy" problems.



This means you get "harder" addition and subtraction problems.

Try some "25 + [ ] = 37" type problems.
Write down the problems and answer them.

Press [ON].

Press [?] three times.

Press [+].

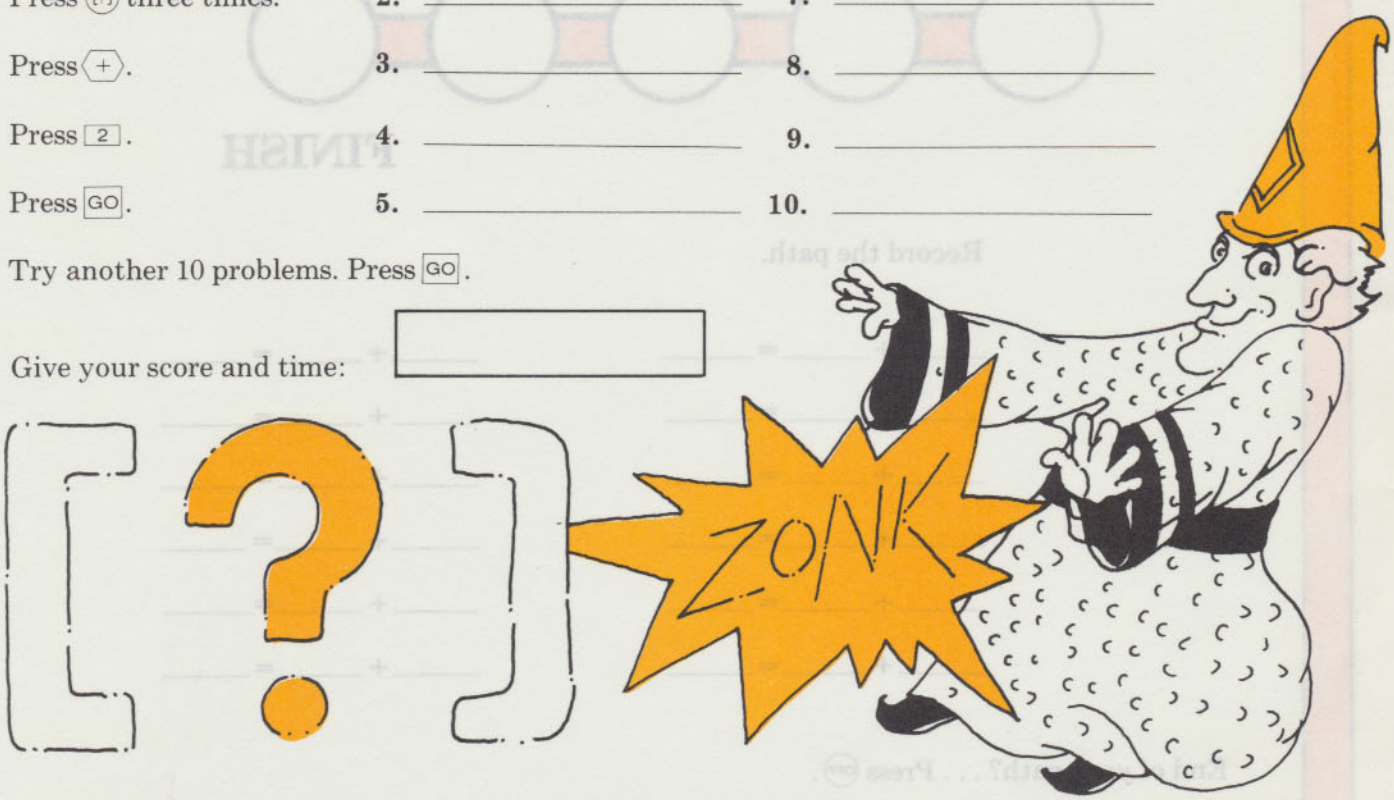
Press [2].

Press [GO].

1. _____	6. _____
2. _____	7. _____
3. _____	8. _____
4. _____	9. _____
5. _____	10. _____

Try another 10 problems. Press [GO].

Give your score and time: _____



Try some "53 − 13 = [ ]" type problems.

Press ⬡.

Press ◯ _____ times.

Press ⬡.

Press □.

Press GO.

Score and time: _____

Fill in the boxes and the blank.

BOX GAME

YOU WILL NEED:
DataMan
Two players

HOW TO PLAY:
A player chooses one of the cards below.

Press ON, [?] *one* time, +, 2, and GO.

Take turns answering the "hard" problems. Keep track of as many answers as you can on your card. (You could have all the answers on your card, some of them or none of them.)

Play five turns.

HOW TO WIN:
Have the most answers!

36	24	18	15
21	54	32	40
7	35	42	48
28	16	45	19

9	49	27	12
20	15	18	24
37	50	77	46
26	89	5	57

48	19	4	16
46	81	43	35
70	33	30	22
7	64	8	44

60	17	46	4
24	18	32	26
87	44	76	15
2	36	5	11

Forget something? . . . Press OFF.

FILL IT FASTER!

How fast are you with problems like these?

48 + 29 = [ ] 37 + [ ] = 65 64 − [ ] = 29

If you still take lots of time to answer them, here's a way to think about them.

Try it on DataMan:

Press ON.

Press 48 + 29 =

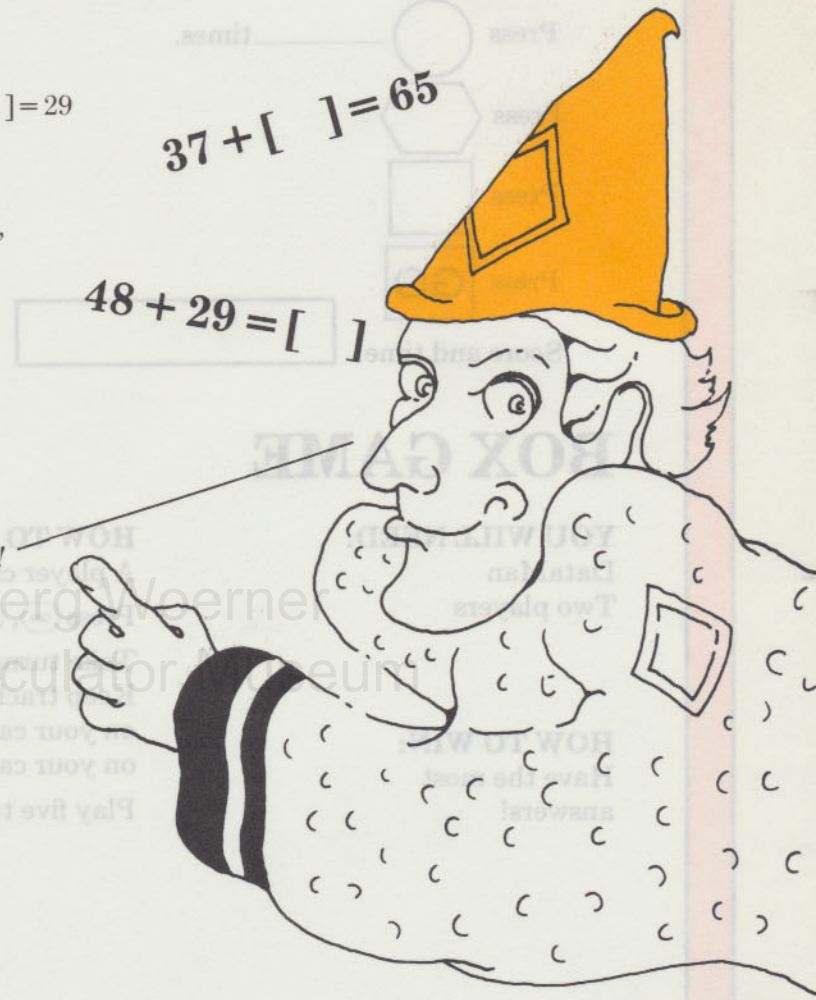
Think 50 + 30 = 80

Press a number around 80. _____

Was your answer correct? _____
If not, try the problem again.

After the second try, DataMan will give you the answer. What is it? _____

How close were you? _____



Fill in the 's. Then try to find each answer for the [ ].

1. 36 + 49 = [_____]

+ 50 =

2. 81 − 27 = [_____]

− =

3. 62 + [_____] = 90

+ =

4. [_____] + 37 = 81

+ =

5. 81 − 46 = [_____]

− =

6. 64 − [_____] = 29

− =

64
−[ ]
29

Try the Missing Number Box game again.
Write down the problems and answer them.

$28 + 75 = [\ ]$

Press ON.

Press [?] one time.

Press +.

Press 2.

Ready? . . . Press GO.

1. _____ 6. _____

2. _____ 7. _____

3. _____ 8. _____

4. _____ 9. _____

5. _____ 10. _____

Score:

Try some "hard" subtraction problems.

Press ON.

Press [?] one time.

Press −.

Press 2.

Press GO.

$62 - 37 = [\ ]$

Score and time:

Try some "hard" problems.

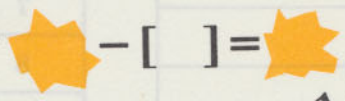
Press ON.

Press [?] two or three times.

Press + or −.

Press 2.

Press GO.



$91 - [\ ] = 38$

$[\ ] + 43 = 70$

Score and time:

Score and time:

After doing the "hard" Missing Number Box problems a few times, is your score and time getting better? _____

Please press OFF.

TALLY HO!

When you play the Number Guesser game, do you think that DataMan has a pattern for giving you a secret number?

Find out! Play the Number Guesser game 10 times. Record the secret number and the number of tries each time in the tally boxes below.

Secret Number	
10's	
20's	
30's	
40's	
50's	
60's	
70's	
80's	
90's	

tally boxes

Number of Tries	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
or more	

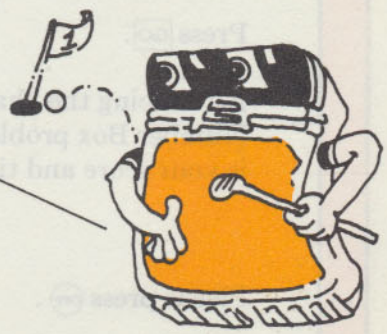
How many tries does it usually take you to guess DataMan's secret number?_____

If the secret number was a large number last time, will it be a small number next time? Why?

_____

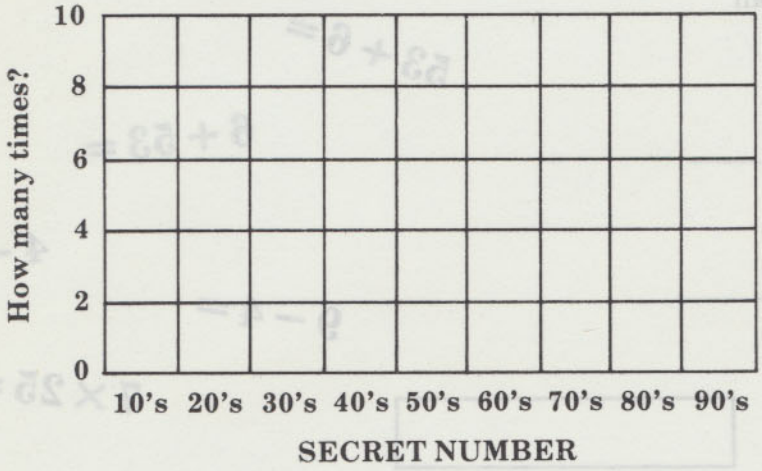
Did you ever guess the secret number in one try?_____

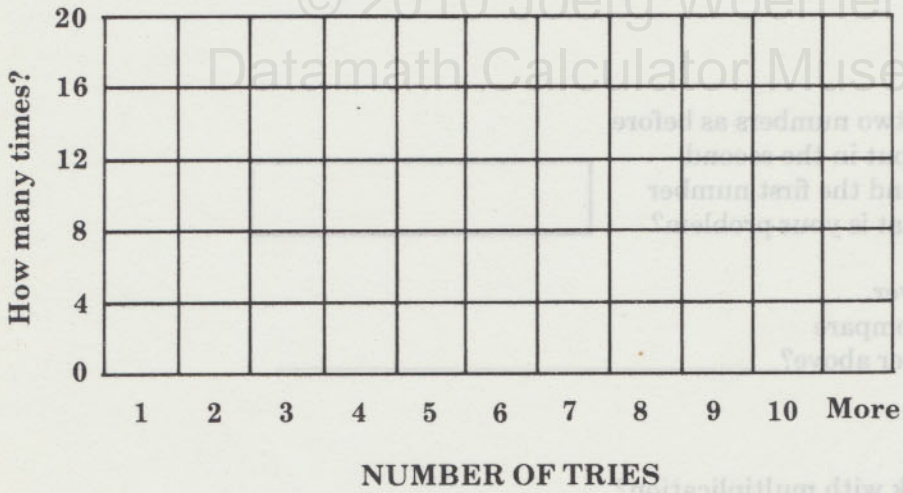
That's a hole in one!!!!



Look at your tally results on page 34 in another way:

Use the grids below to make the bar graphs of the tally boxes on page 34.





Return to this lesson many times. What do you notice after 50 games? 70 games? . . . 100 games?

Do you think that DataMan has a pattern for giving you a secret number or are they mixed up?

_____

All guessed out? . . . Press (OFF).

FIND OUT MORE

Explore more math with DataMan

A. Press ON.

Press any number 0-99._____

Press +.

Press a second number._____

Press =.

What is your problem? ☐

Find the answer._____

Press ON.

Use the same two numbers as before but this time put in the second number first and the first number in second. What is your problem? ☐

Find the answer._____
How does it compare with the answer above?_____

B. Does this work with multiplication?_____

Give an example: ☐ and ☐

C. Does this work for subtraction?_____

Give an example: ☐ and ☐

D.

Press ON.

Press a number 1-99. _____

Press ÷ and 0 .

What shows on DataMan? [ ]

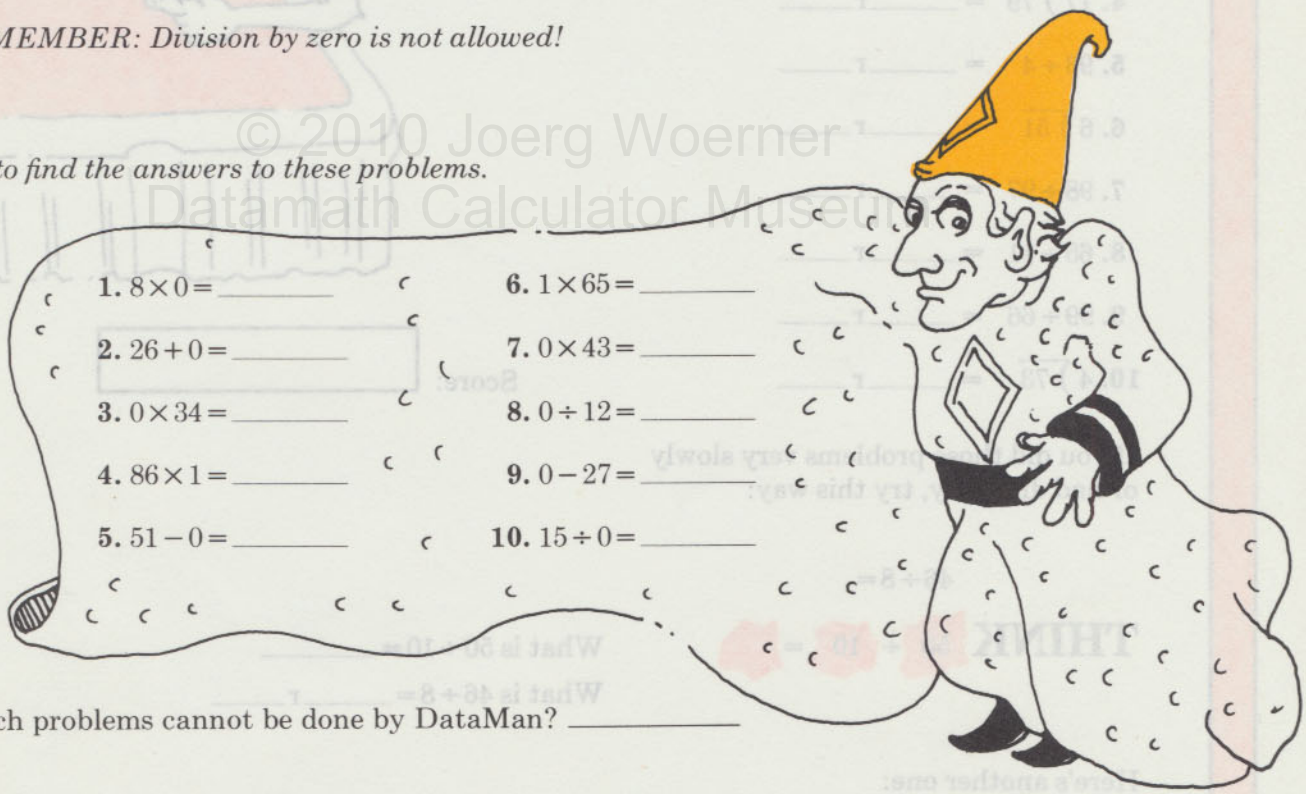
Why do you think that happened? _____

If you were to try a problem like 8 ÷ 0 on a regular calculator, what would happen?

_____

REMEMBER: Division by zero is not allowed!

Try to find the answers to these problems.



1. 8 × 0 = _____
2. 26 + 0 = _____
3. 0 × 34 = _____
4. 86 × 1 = _____
5. 51 − 0 = _____
6. 1 × 65 = _____
7. 0 × 43 = _____
8. 0 ÷ 12 = _____
9. 0 − 27 = _____
10. 15 ÷ 0 = _____

Which problems cannot be done by DataMan? _____

If you were to try problems 1-10 with a regular calculator, which ones still could not be done? _____

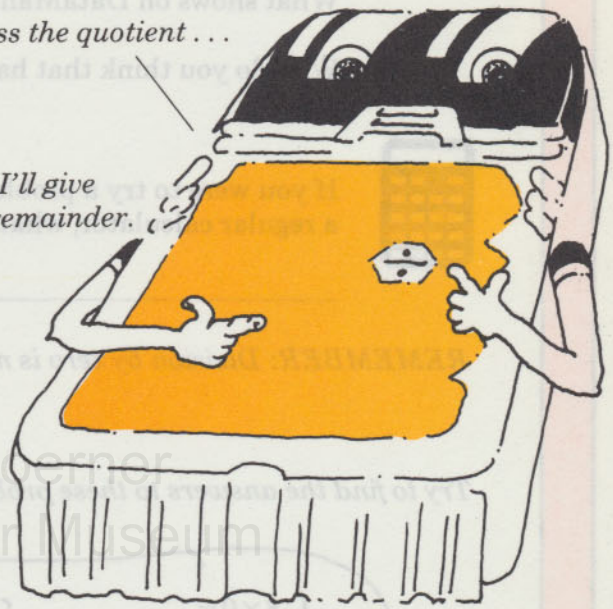
Save the battery! . . . Press OFF.

DIVVY 'EM UP!

Try these division problems.

Your guess **DataMan**

1. $46 \div 8$ = _____ r _____
2. $35\overline{)77}$ = _____ r _____
3. $39 \div 4$ = _____ r _____
4. $17\overline{)79}$ = _____ r _____
5. $93 \div 4$ = _____ r _____
6. $6\overline{)51}$ = _____ r _____
7. $98 \div 97$ = _____ r _____
8. $65 \div 11$ = _____ r _____
9. $99 \div 66$ = _____ r _____
10. $4\overline{)73}$ = _____ r _____



Score:

If you did those problems very slowly or had difficulty, try this way:

$46 \div 8 =$

THINK 50 ÷ 10 = ____

What is $50 \div 10$ = _____

What is $46 \div 8$ = _____ r _____

Here's another one:

$17\overline{)79} \rightarrow 79 \div 17 =$

Think: ____ ÷ ____ = _____

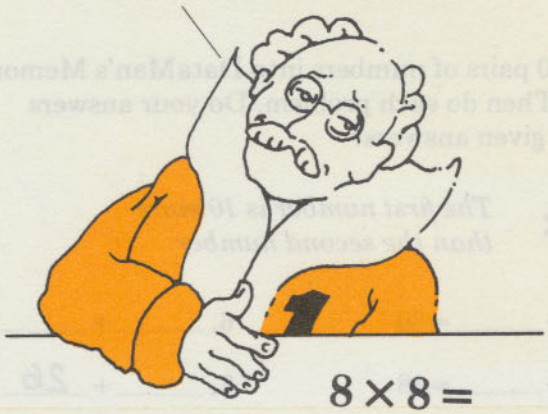
What is $17\overline{)79}$ = _____ r _____

Try some more division problems. Guess the quotient and remainder for each problem.

Your guess

1. $37 \div 3$ = _____ r _____
2. $6\overline{)64}$ = _____ r _____
3. $7\overline{)50}$ = _____ r _____
4. $90 \div 11$ = _____ r _____
5. $67 \div 8$ = _____ r _____
6. $9\overline{)89}$ = _____ r _____
7. $29 \div 9$ = _____ r _____
8. $76 \div 8$ = _____ r _____
9. $7\overline{)58}$ = _____ r _____
10. $95 \div 3$ = _____ r _____

Knowing your times math tables can help!



$8 \times 8 =$

$7 \times 7 =$

$9 \times 3 =$

Score: ☐

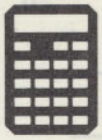
Now try these. Guess the quotient as close as you can. Do not worry about any remainders this time.

	Guess	Check
11. $464 \div 8$ =	60	480
12. $35\overline{)770}$ =		
13. $390 \div 4$ =		
14. $17\overline{)790}$ =		
15. $93 \div 40$ =		
16. $6\overline{)510}$ =		
17. $980 \div 97$ =		
18. $650 \div 11$ =		
19. $999 \div 66$ =		
20. $40\overline{)730}$ =		

To check your guess, multiply the divisor times the quotient.

$464 \div 8 = [\ ]$ is like $8 \times [\ ] = 464$

THINK $8 \times 60 = 480$

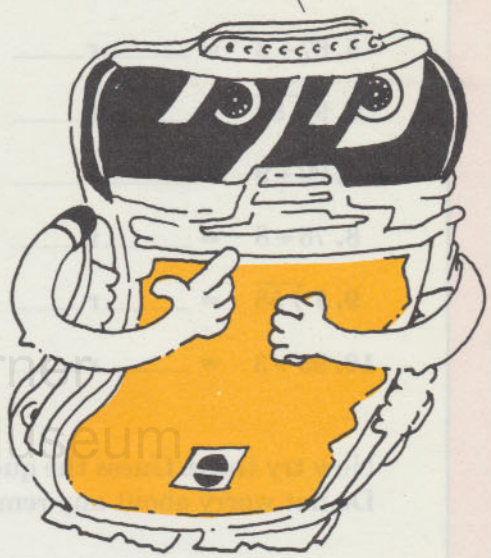


You can also use a regular calculator to check.

PAIR UP!

Program 10 pairs of numbers into DataMan's Memory Bank. Press GO. Then do each problem. Do your answers match the given answers?

I have the answers. You find the pairs of numbers to make up the problems.



HINT: *The first number is 10 more than the second number.*

1. 20 + _____ = 30
2. _____ + _____ = 18
3. _____ + _____ = 52
4. _____ + 33 = 76
5. _____ + _____ = 28
6. _____ + _____ = 94
7. _____ + 26 = 62
8. _____ + _____ = 40
9. _____ + _____ = 90
10. _____ + _____ = 84

Score: _____

30 + 20 = 50

If you did not get all 10 pairs in one try, GO again.

Score: _____

90 − 30 = 60

21 − 7 =

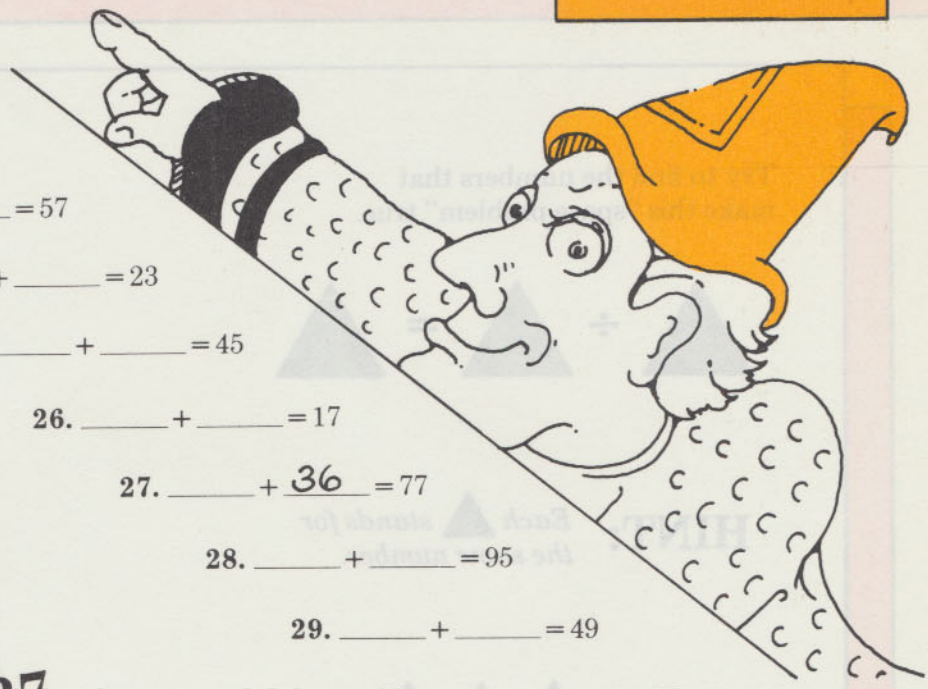
HINT: *The first number is 3 times the second number.*

11. 30 − _____ = 20
12. _____ − _____ = 6
13. _____ − _____ = 10
14. _____ − 11 = 22
15. _____ − _____ = 50
16. _____ − _____ = 44
17. _____ − _____ = 32
18. _____ − _____ = 18
19. _____ − 19 = 38
20. _____ − _____ = 66

Score: _____

GO

The second number is 5 less than the first number.



21. ____ + ____ = 25

22. ____ + ____ = 21

23. 31 + ____ = 57

24. ____ + ____ = 23

25. ____ + ____ = 45

26. ____ + ____ = 17

27. ____ + 36 = 77

28. ____ + ____ = 95

29. ____ + ____ = 49

30. ____ + ____ = 71

18
+ 13
= 31

21 + 16 = 37

Score: _____

Make up 10 problems for a friend.

Give a hint:

HINT: _____

_____

Problems:

1. ____ ____ = ____
2. ____ ____ = ____
3. ____ ____ = ____
4. ____ ____ = ____
5. ____ ____ = ____
6. ____ ____ = ____
7. ____ ____ = ____
8. ____ ____ = ____
9. ____ ____ = ____
10. ____ ____ = ____

All paired off? . . . (OFF) .

SEEING STARS

Try to find the numbers that make this "space problem" true.

▲ ÷ ▲ = ▲

HINT: *Each ▲ stands for the same number.*

The answer for ▲ ÷ ▲ = ▲ is 1 ÷ 1 = 1.

Use DataMan to help you find numbers that make each of the "space problems" true.

For example: ▲❙ − ▲❙ = ❙ could be 10 − 10 = 0 if each ▲ is 1 and each ❙ is a zero.

SPACE PROBLEM	YOUR PROBLEM
1. ★▲ + ▲★ = 33	_____
2. ▲▲ + ▲ = ▲6	_____
3. ❙★ + ❙★ = ★0	_____
4. 5▲ − ▲5 = ▲7	_____
5. ★★ × ★ = 27★	_____

If you choose ★▲ to stand for 15, then ▲★ is 51. Does 15 + 51 = 33?

Try some of these "space problems."
Check them out with DataMan.

SPACE PROBLEM **YOUR PROBLEM**

6. ▲▲+▲▲=1▲8 _____

7. 7★−★7=▲7 _____

8. ★▲×★▲=★▲▲ _____

9. ▌▌×▌=8▌1 _____

10. ▌★+★▌=1★4 _____

These "space problems" may have more than one answer.

11 ▌▌÷▌=▲▲ _____

12. ▲▲+▲▲=▌▌ _____

▌▌+▌▌=★★ _____

13. ★▌▌×▲=★▌×▲▌ _____

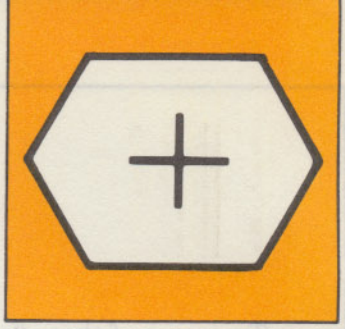
14. ★+▲=▲+★ _____

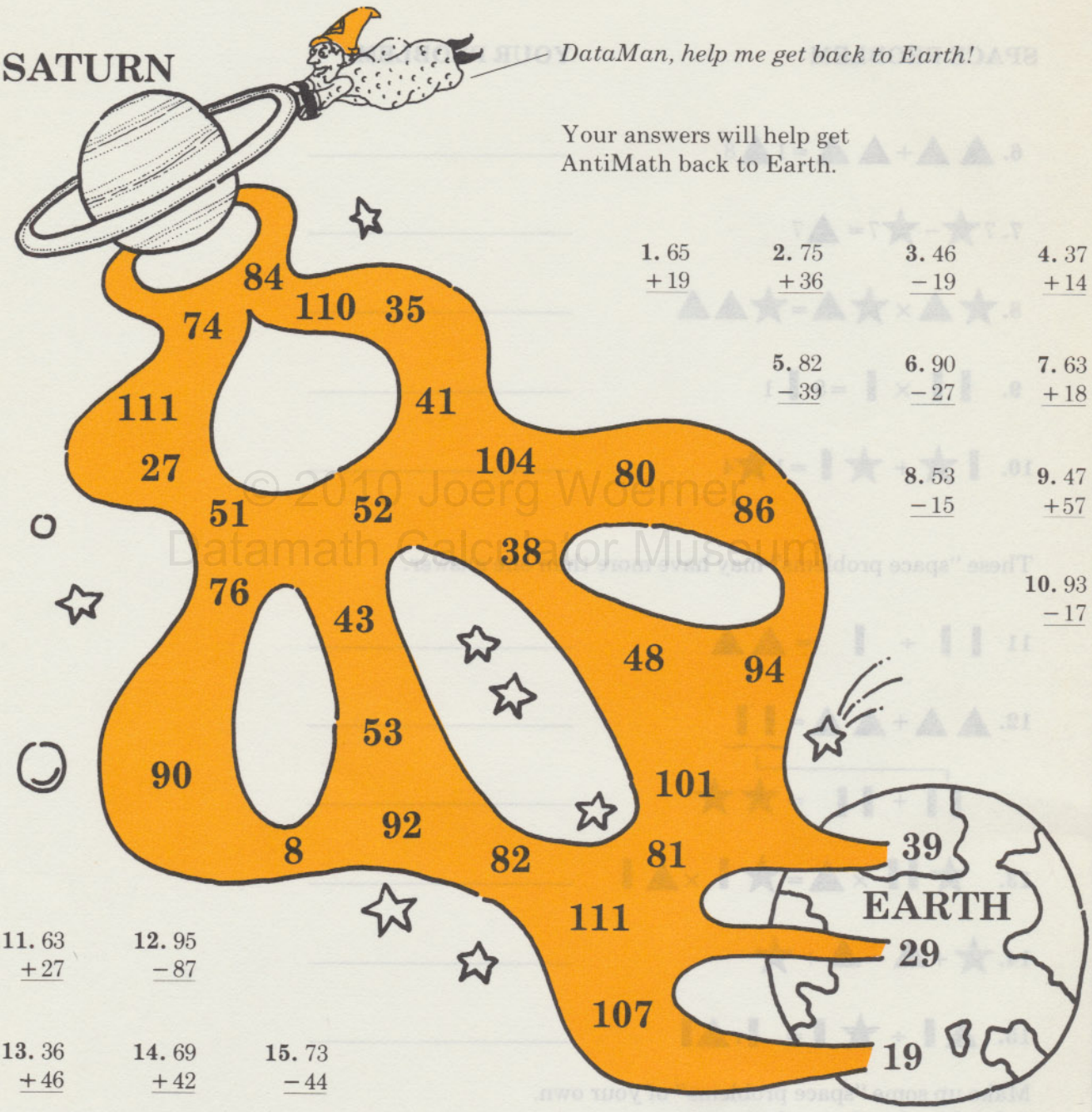
15. ▲▌÷★▌=▌r▲▌ _____

Make up some "space problems" of your own.
Ask a friend to figure them out.

Spaced out? . . . Press OFF .

BACK TO EARTH





Your answers will help get AntiMath back to Earth.

1. 65 + 19	**2.** 75 + 36	**3.** 46 − 19	**4.** 37 + 14
5. 82 − 39	**6.** 90 − 27	**7.** 63 + 18	
8. 53 − 15	**9.** 47 + 57		
10. 93 − 17			
11. 63 + 27	**12.** 95 − 87		
13. 36 + 46	**14.** 69 + 42	**15.** 73 − 44	

Landed? . . . Please turn DataMan (OFF).

CHECK UP

1. Do you know all of these basic addition facts?

6	3	6	7	9	8	9	8	9	5
+5	+8	+7	+5	+2	+6	+9	+9	+7	+9

SCORE ↓ POSSIBLE POINTS

10

Play Wipe Out with a friend.
If you win, score 2 bonus points.

2

2. Try these subtraction problems.

17	36	25	30	63	45	56	49	26	41
−8	−7	−9	−4	−6	−4	−8	−9	−7	−9

10

Play Force Out with a friend.
If you win, score 2 bonus points.

2

3. How well do you know your basic multiplication facts?

4	7	5	9	2	6	3	8	7	7
×6	×3	×8	×0	×8	×8	×6	×1	×7	×5

10

4. Play Electro Flash with the "nine times" table.
Give DataMan's Score.

10

5. Put these sets of numbers in increasing order.

23, 28, 27 _____ 78, 59, 75 _____

67, 78, 89 _____ 9, 56, 54 _____

35, 29, 5 _____ 67, 56, 100 _____

Give the "middle number" in each blank.

45_____47 28_____50 39_____51 98_____100

10

Play the Number Guesser game. If you guess the secret number in less than 6 tries, score 3 bonus points.

3

6. Now try your skill with division.

$7\overline{)56} =$ _____	$63 \div 9 =$ _____	$8\overline{)48} =$ _____
$72 \div 8 =$ _____	$5\overline{)35} =$ _____	$45 \div 8 =$ _____
$8\overline{)56} =$ _____	$0 \div 14 =$ _____	$7\overline{)36} =$ _____
$49 \div 6 =$ _____	Give DataMan's score.	

SCORE ↓ POSSIBLE POINTS

10

7. Try some Missing Number Box problems.
Press ON, [?] three times, ×, and GO.
Give DataMan's score.

10

8. Try some "hard" subtraction problems. Think!

45	67	90	34	68	21	63	67	40	55
−33	−47	−25	−19	−59	−13	−44	−56	−23	−36

10

9. Try more Missing Number Box problems.
Press ON, [?] *one* time, +, 2, and GO.
Give DataMan's score.

10

10. Put these problems into DataMan's Memory Bank.

$23 \times 3 =$ _____	$50 \times 4 =$ _____	$17 \times 5 =$ _____
$46 \times 2 =$ _____	$20 \times 10 =$ _____	$45 \times 5 =$ _____
$80 \times 4 =$ _____	$31 \times 6 =$ _____	$27 \times 8 =$ _____
$45 \times 9 =$ _____	Do each problem.	

Give DataMan's score.

10

Are you a DataMan expert?

Total score for page 46: 50

Total score for page 45: 57

TOTAL SCORE: 107

This is to certify that

_____

can do almost anything! (with DataMan)

SIGNED _____

TEACHER

÷ × − + =

This is to certify that

_____

is a super number guesser!!!

SIGNED _____

TEACHER

???

This is to certify that

_____

can program problems
into DataMan (and do 'em!)

SIGNED _____

TEACHER

GO

This is to certify that

_____

is electro flash quick
with the math tables.

SIGNED _____

TEACHER

This is to certify that

_____

can "box" numbers and
answers for hard problems.

SIGNED _____

TEACHER

2 [?]

This is to certify that

_____

can use subtraction to
force out almost anyone.

SIGNED _____

TEACHER

This is to certify that

_____

can "box" numbers and
answers for easy problems.

SIGNED _____

TEACHER

1 [?]

This is to certify that

_____

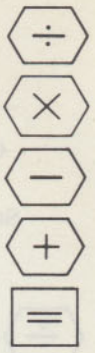
cannot be wiped out
very easily in math.

SIGNED _____

TEACHER

☐ Play *Number Guesser* game (10)
☐ Know about betweenness (10)
☐ Explore 2-digit place value (11)
☐ Know order of numbers (11)
☐ "Middle number" method (26,27)
☐ Find average of 2 numbers (27)
☐ Tally/graph results (34, 35)
☐ Play "Deep Space" game
☐ Play "Earth Bound" game
optional:
☐ Play "Moon Swirl" game

☐ Check out DataMan (2,3,14,15,36,37)
☐ Basic facts, "easy" problems (4,5)
☐ Remainders count (22)
☐ Tens Puzzle (23)
☐ Even/odd numbers (24,25)
☐ Total Up Maze (28,29)
☐ Math rules (36,37)
☐ Estimate quotients (38,39)
☐ Space Problems (42,43)
☐ 2-digit number problems (44)
☐ Review (45,46)
☐ Play "Star Numbers" game
☐ Play "A-Maze-Mint" game
☐ Play "Moon Swirl" game



☐ Play *Electro Flash* game (6,7)
☐ Practice math tables (7,9)
  ☐ Addition
  ☐ Subtraction
  ☐ Multiplication
  ☐ Division

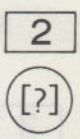
☐ Play "Star Rule" Game
optional:
☐ Play "Moon Swirl" game

☐ Use *Memory Bank* (16)
☐ Play Starmath Race (17)
☐ Add/subtract, no regrouping (17)
☐ Add 2-digit numbers (17,40,41)
☐ Subtract 2-digit numbers (17,40)
☐ Pairs of numbers (40,41)
☐ Play "Moon Swirl" game

Play *Force Out* game using:
☐ numbers 1-9 (12)
☐ numbers 1,3,5,7,9 (13)
☐ numbers 5-9 (13)
☐ numbers 1-9 once each (13)

optional:
☐ Play "Moon Swirl" game

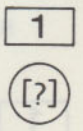
Missing Number "Box" Problems, Level 2:
☐ Add 2-digit numbers (30)
☐ Subtract 2-digit numbers (31)
☐ Play "Box Game" (31)
☐ Estimate sums and differences (32,33)
☐ Play "Astro Race" game
☐ Play "Moon Swirl" game



☐ Play *Wipe Out* game (8)
☐ Know sums through 18

optional:
☐ Play "Moon Swirl" game

Missing Number "Box" Problems, Level 1:
☐ Practice basic facts (18,19)
☐ ▲ + ▲ = [ ]
☐ [ ] + ▲ = ▲
☐ ▲ + [ ] = ▲
} types of problems
☐ "4-in-a-Row" game (20,21)
☐ Play "Data King" game
☐ Play "Box-a-Hundred" game
☐ Play "3-in-a-Row" game
☐ Play "Astro Race" game
☐ Play "Moon Swirl" game



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