THE POWER OF FORGETTING

Six Essential Skills to Clear Out Brain Clutter and Become the Sharpest, Smartest You

MIKE BYSTER with KRISTIN LOBERG
Creator of the Award-Winning Math and Memory System

Diagrams, Brain Teasers, and Mental Exercises

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Figure 1

a. Black
b. Gray
c. Gray
d. Black

Figure 2

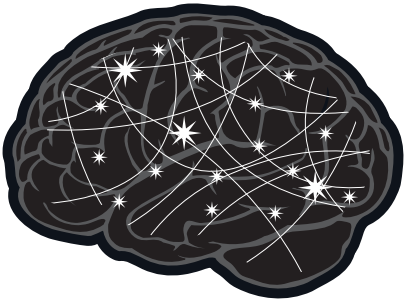


Figure 3

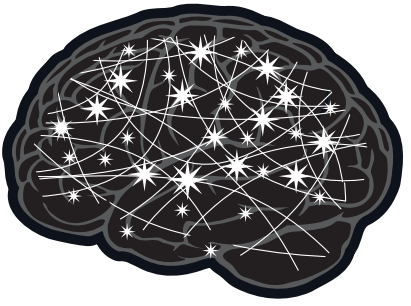


Figure 4

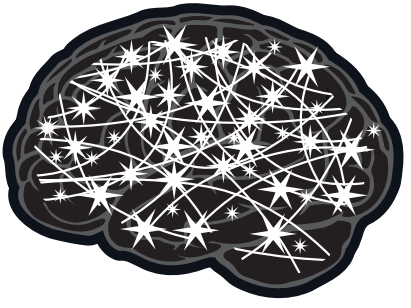


Figure 5

72 ÷ 91 = 0.791208
84 ÷ 91 = 0.923076
31 ÷ 91 = 0.340659
56 ÷ 91 = 0.615384

Figure 6

28 ÷ 91 = _____
35 ÷ 91 = _____
19 ÷ 91 = _____

Figure 7

Aoccdrnig to a rcheeraser at Cmabrigde Uinervtisy, it deosn't mttaer in waht oredr the ltteers in a wrod are; the olny iprmoatnt tihng is taht the frist and lsat ltteer be at the rghit pclae. The rset can be a toatl mses and you can sitll raed it wouthit porbelm. Tihs is bcuseae the huamn mnid deos not raed ervey lteter by istlef, but the wrod as a wlohe.

Figure 8

Figure 9

I always know that when I see the number 843 it's the word "the." Seeing words through the lens of numbers takes practice, but everyone can work on this skill and get good at it. Like memorizing strings of numbers, this skill taps more mental storage power and helps ignite networks in your brain to facilitate quick processing. An added bonus is that when you're calling an automated answering machine from your cell phone and it asks you to dial the person you want by the numbers on your keypad, you'll be able to do it! Try some for yourself. What do these "words" mean?

82253
27323
7428873
24453736
2886662453

Figure 10

Here's an added challenge. It's hard to do this when you don't know where one word ends and another begins. See if you can decode the following short sentence or statements. What is being said here?

4277924784329!
47328646378446525453

Figure 11

ALL THE PRESIDENTS' NAMES

The following set of sentences, each of which reflects a bizarre statement, is how I remember all the presidents of the United States. Remember, this is my way of doing it, but it doesn't have to be your way. Use this as an example—a model. See what you can come up with in your own wild imagination. I encourage you to go online and post your ideas there; let's see who can come up with the best, most vivid mental pictures!

1. George and Jeff made money.
    - George = George Washington
    - and = John Adams
    - Jeff = Thomas Jefferson
    - made = James Madison
    - money = James Monroe

2. Quickly, Jack drove the van to Harry's tie shop.
    - Quickly = John Quincy Adams
    - Jack = Andrew Jackson
    - van = Martin Van Buren
    - Harry's = William Henry Harrison
    - tie = John Tyler

3. He poked Zack and said, "Fill up the pair of cannons!"
    - poked = James Polk
    - Zack = Zachary Taylor
    - Fill = Millard Fillmore
    - pair = Franklin Pierce
    - cannons = James Buchanan

Figure 11 [con't]

4. Abe and John were granted a hay field.
   - Abe = Abraham Lincoln
   - John = Andrew Johnson
   - granted = Ulysses S. Grant
   - hay = Rutherford B. Hayes
   - field = James Garfield

5. Arthur went to Cleveland with Harry. Cleveland, no kidding!
   - Arthur = Chester A. Arthur
   - Cleveland = Grover Cleveland
   - Harry = Benjamin Harrison
   - Cleveland = Grover Cleveland
   - kidding = William McKinley

6. Teddy ate taffy with Will. Hardly cool.
   - Teddy = Teddy Roosevelt
   - taffy = William H. Taft
   - Will = Woodrow Wilson
   - Hardly = Warren G. Harding
   - cool = Calvin Coolidge

7. Who did Frank tell the truth to? Howard and Kenny.
   - Who = Herbert Hoover
   - Frank = Franklin D. Roosevelt
   - truth = Harry S. Truman
   - Howard = Dwight D. Eisenhower
   - Kenny = John F. Kennedy

8. John nicked the Ford car again.
    - John = Lyndon B. Johnson
    - nicked = Richard Nixon
    - Ford = Gerald Ford
    - car = Jimmy Carter
    - again = Ronald Reagan

The next three presidents are easy to remember: George H. W. Bush, Bill Clinton, and George W. Bush. Few people have a tough time with these because they are so recent (and I'm assuming you can name the current president).

Remembering the thirteen colonies is a much easier task. You just have to remember the following three sentences: **George** and **Mary** were on the **verge** of **cutting** a **deal**.

He received **three new road maps**.

She received **two cars** and a **pen**.

From these sentences can you guess the connection to all thirteen colonies? I'll list them here, and I bet you'll "see" them soon enough: Georgia, Maryland, Virginia, Connecticut, Delaware, New Hampshire, New Jersey, New York, Rhode Island, Massachusetts, North Carolina, South Carolina, and Pennsylvania.

Figure 12

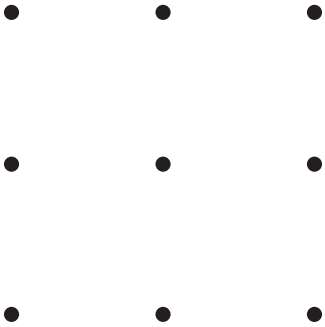


Figure 13

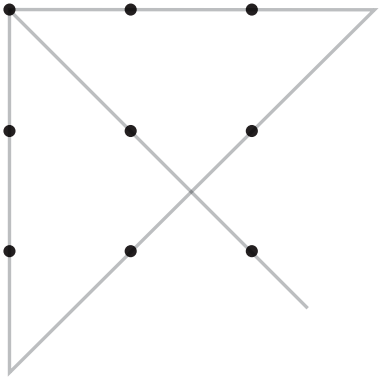


Figure 14

3 7 9 10

Here are some potential ways to play with these numbers using basic math to arrive at the number 24:

[(9 × 3) + 7] – 10 = 24

or

[(10 – 7) × 9] – 3 = 24

or

[(10 – 9) + 7] × 3 = 24

I'll give you one more example:

2 4 5 8

Possible solutions include:

[(8 ÷ 2) × 5] + 4 = 24

or

[(8 – 5) × 4] × 2 = 24

or

[(5 + 2) – 4)] × 8 = 24

Figure 15

1. 

2. economy

3. WINEEEE

4. PumPkinPie

5. JOBINJOB

6. L
   O
   V
   E

7. NINE
   CUMULUS

8. DOCTOR DOCTOR

9. MCE MCE MCE

10. BAN ANA

11. ABCDEFGHJMOPQRSTUVWXYZ

12. CAN CAN

13. 9S2A5F4E1T8Y6

14. BillED

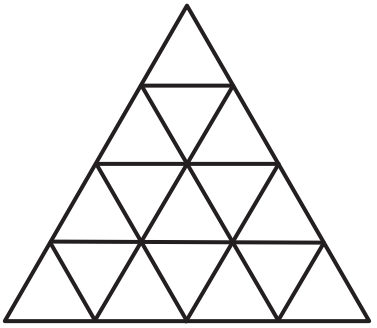
15. E
    K
    A
    M

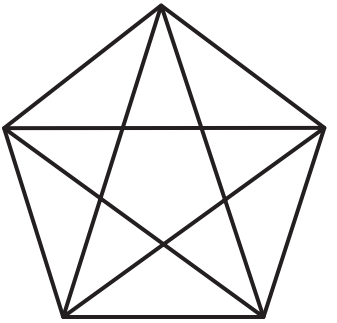
[Solution shown in Figure 21]

Figure 16

- Bird on a wire
- Bad influence
- *Alice in Wonderland*
- Well-balanced meal
- Camping overnight
- Take a step backward
- Many are called but few are chosen
- Three strikes you're out!

Figure 17





1 = H on a U
1 = GL for M
52 = C in a D
88 = PK

[Solution shown in Figure 21]

Figure 18

PATTERN 1: SQUARING NUMBERS IN THE FIFTIES

Example: 57 × 57
Step 1: Always start with the number 25. Now add the ones digit (7) to it (25 + 7 = 32).
Step 2: Square the ones digit (7 × 7 = 49). Tack that number onto the answer from step 1.
Answer: 57 × 57 = 3,249

If the number from step 2 is less than 10, you have to put a 0 in front of it.

Example: 53 × 53
Step 1: 25 + 3 = 28
Step 2: 3 × 3 = 09 (Since 9 is less than 10, put a 0 in front of it.)
Answer: 53 × 53 = 2,809

PATTERN 2: SQUARING NUMBERS THAT END IN FIVE

Example: 65 × 65
Step 1: Take the tens digit (6) and multiply it by the number one greater than it (7) (6 × 7 = 42).
Step 2: Tack 25 onto the end of the number from step 1.
Answer: 65 × 65 = 4,225

PATTERN 3: MULTIPLYING TWO NUMBERS THAT END IN FIVE AND ARE EXACTLY TEN APART

Example: 75 × 85
Step 1: Take the smaller tens digit (7) and multiply it by the number that is one greater than the larger tens digit (8) (8 + 1 = 9; 7 × 9 = 63).
Step 2: Tack 75 onto the end of the number from step 1.
Answer: 75 × 85 = 6,375

PATTERN 4: MULTIPLYING TWO NUMBERS THAT END IN FIVE AND ARE TWENTY APART

Example: 65 × 85
Step 1: Take the smaller tens digit (6) and multiply it by the number one greater than the larger tens digit (8) (8 + 1 = 9; 6 × 9 = 54).
Step 2: Add 1 to the number from step 1 (54 + 1 = 55).
Step 3: Tack 25 onto the end of the number from step 2.
Answer: 65 × 85 = 5,525

PATTERN 5: MULTIPLYING TWO NUMBERS IN THE NINETIES

When you multiply two numbers in the nineties, in parentheses next to each number put how far away that number is from 100. Since 93 is 7 away from 100, and 96 is 4 away from 100, the problem 93 × 96 would be written like this: 93(7) × 96(4).

Example: 93(7) × 96(4)
Step 1: Add up the numbers in parentheses (7 + 4 = 11) and subtract that number from 100 (100 – 11 = 89).
Step 2: Multiply the two numbers in parentheses and tack that product onto the end of the number from step 1 (7 × 4 = 28).
Answer: 93 × 96 = 8,928

If the number from step 2 is less than 10, put a 0 in front of it.

Example: 97(3) × 98(2)
Step 1: 3 + 2 = 5; 100 – 5 = 95
Step 2: 3 × 2 = 06
Answer: 97 × 98 = 9,506

Figure 18 [con't]

PATTERN 6: SQUARING NUMBERS IN THE FORTIES

Example: 43 × 43
Step 1: Start out with 15 and add the ones digit to it (15 + 3 = 18).
Step 2: Figure out by how much the number you are squaring (43) is less than 50 (50 – 43 = 7) and square that number (7 × 7 = 49). Tack that number onto the end of the number from step 1.
Answer: 43 × 43 = 1,849

If the number from step 2 is less than 10, put a 0 in front of it.

Example: 48 × 48
Step 1: 15 + 8 = 23
Step 2: 50 – 48 = 2; 2 × 2 = 04
Answer: 48 × 48 = 2,304

PATTERN 7: MULTIPLYING TWO NUMBERS THAT ARE BETWEEN 100 AND 109

Example: 106 × 108
Step 1: The first digit of the answer is always 1.
Step 2: To get the next two digits, add the ones digits (6 + 8 = 14).
Step 3: To get the final two digits, multiply the ones digits (6 × 8 = 48).
Answer: 106 × 108 = 11,448

If the number in either step 2 or step 3 is less than 10, put a 0 in front of it.

Example: 102 × 104
Step 1: The first digit of the answer is always 1.
Step 2: Add the ones digits together (2 + 4 = 06).
Step 3: Multiply the ones digits (2 × 4 = 08).
Answer: 102 × 104 = 10,608

Figure 18 [con't]

PATTERN 8: MULTIPLYING TWO NUMBERS THAT ARE BETWEEN 200 AND 209

Example: 204 × 209
Step 1: The first digit of the answer is always 4.
Step 2: To get the next two digits, add the ones digits and double the product (4 + 9 = 13; 13 × 2 = 26).
Step 3: To get the final two digits, multiply the ones digits (4 × 9 = 36).
Answer: 204 × 209 = 42,636

If a number from either step 2 or step 3 is less than 10, put a 0 in front of it.

Example: 207 × 201
Step 1: The first digit of the answer is always 4.
Step 2: 7 + 1 = 8; 8 × 2 = 16
Step 3: 7 × 1 = 07
Answer: 207 × 201 = 41,607

PATTERN 9: MULTIPLYING TWO TWO-DIGIT NUMBERS THAT END IN ONE

Example: 71 × 51
Step 1: Multiply the tens digits (7 × 5 = 35) and tack a 0 onto the end of that product (350).
Step 2: Add the tens digits (7 + 5 = 12) and add that number to the number from step 1 (350 + 12 = 362).
Step 3: Tack a 1 onto the end of the number from step 2.
Answer: 71 × 51 = 3,621

Example: 31 × 41
Step 1: 3 × 4 = 12. Tack on a 0 and you get 120.
Step 2: 3 + 4 = 7; 120 + 7 = 127
Step 3: Tack a 1 onto the end.
Answer: 31 × 41 = 1,271

Figure 19

54 × 54 =	59 × 59 =
85 × 85 =	35 × 35 =
55 × 65 =	25 × 35 =
25 × 45 =	55 × 75 =
95 × 94 =	96 × 92 =
46 × 46 =	42 × 42 =
103 × 105 =	104 × 109 =
206 × 205 =	208 × 202 =
41 × 61 =	91 × 31 =

Figure 20

postmaster = _____
Elvis = _____
the eyes = _____
Clint Eastwood = _____
a decimal point = _____
a gentleman = ____ _____
no cigar = _____

Figure 21

Able was I ere I saw Elba.
A man, a plan, a canal: Panama.
Madam, I'm Adam.
Madam in Eden, I'm Adam.
Doc, note: I dissent. A fast never prevents a fatness. I diet on cod.
Never odd or even.

No way, a papaya won!
Some men interpret nine memos.
Too bad I hid a boot.
Was it a car or a cat I saw?
A Santa at NASA.

Figure 22

0 = hero
1 = bun
2 = shoe
3 = tree
4 = door
5 = hive
6 = sticks
7 = heaven
8 = gate
9 = vine
10 = hen

Figure 23

A = bay
B = bee
C = sea
D = deep
E = eve
F = effect
G = geology
H = age
I = eye
J = jay
K = quay
L = elm
M = Emma
N = end
O = open
P = pea
Q = cue
R = art
S = essay
T = tea
U = you
V = veer
W = double you
X = exit
Y = why
Z = zebra

Figure 24

A = artichoke
B = bat
C = cake
D = dog
E = elephant
F = fireman
G = goat
H = horse
I = iron
J = jelly
K = kangaroo
L = llama
M = mouse
N = napkin
O = orange
P = pail
Q = queen
R = rat
S = shoe
T = tank
U = umbrella
V = vase
W = wagon
X = xylophone
Y = yarn
Z = zebra

Figure 25

1756 composer
Classical era
600
Salzburg
age of five
royalty
Vienna
Requiem
light and dark
Western art
Beethoven
35

Figure 26

This nation asks for action, and **action now.** *Our greatest primary task is to* **put people to work.** *This is no unsolvable problem if we face it wisely and courageously. It can be accompanied in part by* **direct recruiting** *by the government itself, treating the task as we would treat the emergency of a war, but at the same time, through this employment, accomplishing greatly needed projects to stimulate and reorganize the use of our* **national resources.**

Figure 27

Hand in hand with this, we must frankly recognize the over-balance of population in our **industrial centers** *and, by engaging on a national scale in a* **redistribution**, *endeavor to provide a better use of the land for those best fitted for the land. The task can be helped by definite efforts to raise the values of* **agricultural** *products and with this the power to purchase the output of our cities. It can be helped by preventing realistically the tragedy of the growing loss, through* **foreclosure**, *of our small homes and our farms. It can be helped by insistence that the Federal, State, and local* **governments** *act forthwith on the demand that their* **cost be drastically reduced**. *It can be helped by the* **unifying of relief activities** *which today are often scattered, uneconomical and unequal. It can be helped by national planning for and supervision of all forms of* **transportation and of communications and other utilities** *which have a definitely public character. There are many ways in which it can be helped, but it can never be helped merely by talking about it. We must act, and act quickly.*

Figure 28

Finally, in our progress toward a resumption of work we require **two safeguards** *against a return of the* **evils** *of the old order: there must be a strict* **supervision** *of all* **banking** *and credits and investments; there must be an* **end to speculation** *with other people's money, and there must be provision for an adequate but* **sound currency**.

Figure 29

Elizabeth it is in vain you say
"**L**ove not"—thou sayest it in so sweet a way:
In vain those words from thee or L.E.L.
Zantippe's talents had enforced so well:
Ah! if that language from thy heart arise,
Breathe it less gently forth—and veil thine eyes.
Endymion, recollect, when Luna tried
To cure his love—was cured of all beside
His follie—pride—and passion—for he died.

Figure 30

HAPS = homework, assignment notebook, pencil or pen, and spiral (how one kid remembers what to bring to class)

GO FISH = garlic, onion, fillets, iceberg lettuce, shallots, horseradish (a grocery store list)

DESK = dentist, eyeglasses, shower gift, kitchen light (a to-do list, with each word triggering something that needs to be addressed)

COPR (pronounced "copper") = catsup, onions, pickle, relish (how my sister reminds my brother-in-law what to order on her hot dog)

Figure 31

1. Ballpoint pen
2. Bar of soap
3. Chocolate bar
4. Cola
5. Leather belt
6. Paperback book
7. Pocket calculator
8. Silverware
9. Syrup
10. Telephone

Figure 32

1. colA
2. telephonE
3. silverwarE
4. paperback booK
5. ballpoint peN
6. bar of soaP
7. syruP
8. chocolate baR
9. pocket calculatoR
10. leather belT

Figure 33

1. leAther belt
2. poCket calculator
3. coLa
4. teLephone
5. baLlpoint pen
6. siLverware
7. chOcolate bar
8. paPerback book
9. baR of soap
10. syRup

Figure 34

AA
BC
CT
DI
EO
FN
GS
HS
IP
JE
KA
LK
ML
NO
OU
PD
QE
RR
ST
TH
UA
VN
WW
XO
YR
ZD

Figure 35

MY LIST

Admittedly, I had a tough time coming up with names for the initials OU, UO, XO, OX, YR, and RY. Nevertheless, I spent only about twenty minutes knocking all these names out, I avoided easy names from my personal life, and I didn't use the Internet or look anything up. What can you drum up? Go online and share your lists at www.MikeByster.com.

- AA: Alan Alda, Abigail Adams
- BC: Bill Cosby, Bill Clinton, Billy Crystal, Charlie Brown, Charles Bronson
- CT: Charlize Theron, Cheryl Tiegs, Tom Cruise, Top Cat
- DI: Don Imus
- EO: Ed O'Neill
- FN: Florence Nightingale, Nick Faldo
- GS: Ginger Spice, Steffi Graf
- HS: Saddam Hussein, Han Solo, Hilary Swank
- IP: Iggy Pop
- JE: John Edwards, Elton John, J. R. Ewing
- KA: Andy Kaufman, Anna Kournikova, King Arthur, Ashton Kutcher
- LK: Lisa Kudrow, k. d. lang
- ML: Mary Todd Lincoln, Martin Lawrence, Liza Minnelli
- NO: Ogden Nash, Oliver North

Figure 35 [con't]

- OU:
- PD: Patrick Dempsey, Patty Duke, Princess Di, David Prowse
- QE: Queen Elizabeth
- RR: Robert Redford, Ray Romano, Ronald Reagan
- ST: Tupac Shakur, Tony Soprano, Shania Twain, Steven Tyler
- TH: Tommy Hilfiger, Hunter S. Thompson, Harriet Tubman, Teri Hatcher
- UA: Al Unser, Ursula Andress
- VN: Nia Vardalos*
- WW: Walt Whitman, Woodrow Wilson, Wendy Williams
- XO:
- YR:
- ZD: Zooey Deschanel*

*These are names that popped into my head even though I can't really tell you who they are or what they do. I must have seen these names somewhere in the media and my brain captured them subconsciously. Again, proof that we can retain way more information than we realize!

Figure 36

Here's the first equation:

$$\begin{array}{r} 32 \\ \times\ 51 \\ \hline \end{array}$$

Step 1: Multiply the tens digits together: 3 × 5 = **15**. *Hold that number in your head.*

Step 2: The second and third steps are the hardest. First, cross-multiply the numbers: 5 × 2 = 10 and 3 × 1 = 3, then add 10 + 3: **13**.

You'll need to keep this number, 13, in your head. You will use this number to make an adjustment to the first number, 15, which should still be in your head. If it helps, you can think of the number 13 here as just a 1 and a 3.

Step 3: Now add the tens digit number of the new number, 13, which is 1, to the first number in your head (15 + 1 = 16), then tack on the 3 to get 163. This is the new number you'll need to remember. Drop all previous numbers from your head and keep only **163**.

Step 4: Finally, multiply the ones digits in the original equation (1 × 2 = 2) and tack the product onto the end of 163. And now you have your answer: **1,632**.

Confused? Bewildered? Lost? Let's do this exercise again with a new set of numbers. Once more, if you need to use a pen and paper to drill down each step and create a mental image of the process, feel free to do so. Okay, let's try the following:

Figure 36 [con"t]

62
× 45

Step 1: Multiply the tens digits (6 × 4 = 24). Keep the number **24** in your head.

Step 2: Cross-multiply (6 × 5 = 30; 2 × 4 = 8) and add (30 + 8) to get **38**.

Step 3: Recall that you had the number 24 in your head from the first step. Now you're going to use this new number, 38, to modify the first number. Take the 3 and add it to 24, which gives you 27. Then tack on the number 8, and you arrive at **278**. *Keep this new number in your head and ditch the previous one*. Say it a few times: two-seven-eight, two-seven-eight. Then it's in your head and it will stay there.

Step 4: Go back to the original equation (62 × 45) and multiply the ones digits (2 × 5 = 10). Uh-oh, the last time we did this exercise we didn't get a two-digit answer. So what do we do here? We cannot just tack on a 10 to the end of 278. What we have to do is one more little step, similar to what we did before. We add the tens digit of our number, 10, which in this case is the number 1, to 278, and we get 279. *Then* we can tack on the ones digit number, 0. Now you have your answer: **2,790**.

Figure 37

AABEGHIILNPTZ DORSW

Figure 38

Self-Test 3

1. NOTEBOOK
2. BASEBALL
3. BUSINESS
4. HOMEWORK
5. BACKYARD
6. PRACTICE
7. STRANGER
8. STRAIGHT
9. CHILDREN
10. QUESTION

Here are some additional challenges that up the ante:

1. Alphabetize the numbers 1 through 8 spelled out:

O N E T W O T H R E E F O U R F I V E S I X S E V E N E I G H T

2. Alphabetize the first six months of the year spelled out:

J A N U A R Y F E B R U A R Y M A R C H A P R I L M A Y J U N E

3. Alphabetize the Great Lakes:

S U P E R I O R M I C H I G A N H U R O N E R I E O N T A R I O

4. Take an entire headline or sentence and try to alphabetize it! Or you can go in reverse—alphabetize a word from *Z* to *A*.

[Solutions shown in Figure 45]

Figure 39

105	102	109
x107	x 104	x 106
= 11,235	= 10,608	= 11,554

Figure 40

102	105	109
x103	x 101	x 108
=	=	=

Figure 41

$56^2 = 3{,}136$
$53^2 = 2{,}809$
$58^2 = 3{,}364$
$54^2 = ????$

Hint: Take away the 5 and look for a pattern.
Answer: 2,916.

Figure 42

57^2 = _____
55^2 = _____
59^2 = _____
51^2 = _____
52^2 = _____

Figure 43

T E N N I S

20 5 14 14 9 19
20 + 5 + 14 + 14 + 9 + 19 = 81

Figure 44

EISML

AELST

SIETLN

[Solutions shown in Figure 45]

Figure 45

Self-Test 1: 31 × 53 = 1,643

Self-Test 2: 74 × 52 = 3,848

Self-Test 3:

1. BEKNOOOT
2. AABBELLS
3. BEINSSSU
4. EHKMOORW
5. AABCDKRY
6. ACCEIPRT
7. AEGNRRST
8. AGHIRSTT
9. CDEHILNR
10. EINOQSTU

Additional Challenges

1. E E E E E E E F F G H H I I I N N O O O R R S S T T T U V V W X
2. A A A A A A B C E E F H I J J L M M N N P R R R R R U U U Y Y Y
3. A A C E E E G H H I I I I I M N N N O O O O P R R R R R S T U U

Number Patterns

Pattern 1: 12, 14, 16

Pattern 2: 8

Multiplying Numbers in the Hundreds

102 × 103 = 10,506

105 × 101 = 10,605

109 × 108 = 11,772

Squaring a Number in the Fifties
$57^2 = 3{,}249$
$55^2 = 3{,}025$
$59^2 = 3{,}481$
$51^2 = 2{,}601$
$52^2 = 2{,}704$

Word Patterns
EISML: smile, slime, limes, miles
AELST: least, steal, teals, tales, slate, stale
SIETLN: listen, tinsel, silent, enlist, inlets

APPENDIX A

Q&A

Odds and Ends and a Few More Reminders in the Classic FAQ Style

Live as if you were to die tomorrow.
Learn as if you were to live forever.

—MAHATMA GANDHI

This appendix includes some frequently asked questions I get from both children and adults. In many of these answers, you'll find echoes of information from previous sections of the book. If you have a question that isn't answered here, just log on to my Web site at www.MikeByster.com and ask me there.

GENERAL QUESTIONS

Q: The idea of "forgetting" and being more efficient in all that we do seems absurdly counterintuitive. Remind me: How can you be "forgetful" and super efficient at the same time?

A: I didn't just put these two concepts together to confuse readers. There's tremendous power in the ability to forget. Although the human brain can take in and retain an enormous amount of information, it's not all that great at processing and working

with tons of data at once—which is what we're increasingly having to do in our work and personal lives. If we can make a habit of instantly forgetting nonessential details we come across, we can make mental room for the information we need to have on hand to solve problems and get more done. Too many of us try to remember everything, rather than be choosy about what to bank in our memories and forget the rest. But the people who discriminate against the trivial and savor the essential are the ones who succeed.

Q: Are you a prodigy or genius?

A: I don't like these labels because they are impossible to define, even from a scientific perspective. I am just a super productive thinker—someone who sees relationships and patterns in the world that most people don't see but could if they tried. And my real gift is being able to teach the skills that allow people to amaze their friends, improve their minds, and become excited about learning. It doesn't take a "genius" to learn my program: Adults and students across the spectrum—from the learning disabled to the most gifted—have had great success in learning my strategies. I believe we all have the potential to become astonishingly productive thinkers, whether or not you call that being a prodigy or genius.

Q: How do you create the shortcuts?

A: I naturally see relationships among numbers. Some of my shortcuts are the result of painstaking trial and error, while other shortcuts come to me at random moments (while watching TV, for example). Some of the shortcuts I've come up with are ones that I found out later were first documented by others, while other shortcuts I believe are unique to me. The shortcuts I present in the book are really just alternative ways to approach a problem. The shortcuts do not bypass reason and problem-solving skills but do help people identify patterns. The ability to recognize patterns is one of the documented tests for cognitive ability.

Q: Why aren't you in Las Vegas making a living gambling?

A: While the math and memory exercises that are a part of my program probably would make anyone better at understanding the odds involved in card games, the truth is that I am much happier helping individuals become more productive in their everyday lives than trying to beat the odds in Vegas. And the casinos have made it clear that they would rather I stayed away from them anyhow.

Q: Why is it important to do math problems in your head when you have a calculator?

A: My system is about much more than multiplying large numbers without using a calculator. It's about exercising your brain and training it to organize information. I like to say that your brain is like any other muscle—the more you exercise it the stronger it will become, and the stronger your brain is the more you can do with it. I've designed my system with this goal in mind.

Q: How hereditary is productive thinking?

A: How we each think is hereditary, but more important, learning strategies such as those that help us organize our thoughts and be creative are highly learnable. These are the very skills that make someone a productive thinker. I like to say that you're never too old to change your brain, but it helps to start early, as there's more time to shape the brain, build on the features that commonly characterize efficient thinkers, and bring out that inner brilliance.

Q: What's the difference between being "naturally gifted" and being a "hard worker"?

A: I see both types of people all the time, and sometimes you cannot tell the difference in their achievements. But I will say

that I've also seen plenty of people who are naturally gifted who don't make much of an effort. These people rarely reach their fullest potential and rarely catch up to the average folks who simply work hard.

Q: What is the most powerful memory strategy of all?

A: The one that works for you. Experiment with all of the strategies and see what resonates with you and your abilities. There is no single "right" strategy—beyond the one that makes sense to you and that you find easy to implement.

Q: Will these strategies help me prevent dementia or general senility?

A: While I cannot make any specific health-related promises or guarantees, I will say that science has now proved that challenging the brain in the ways I describe in this book can improve the brain's functionality and help stave off the onset of progressive age-related brain disease. There are still lots of missing clues to the science of the brain and exactly how and why it declines over time.

I don't doubt for a second that we'll come to learn more about the true power of mental exercise in disease prevention—not just in the mind but also in the entire body. Until we have all those clues figured out and solid proof of what we can do to extend the longevity of our minds and bodies, I think we would do well to keep our minds and bodies engaged as much as possible. This means physical challenges to the body and cognitive challenges to the mind. Even if you're someone who is destined to get a brain disease owing to age or genetics, delaying its onset for even a few years by maintaining an active brain could dramatically improve your quality of life.

QUESTIONS FROM PARENTS, TEACHERS, AND EDUCATORS

Q: Can these ideas help American schools overcome their problems with math and science education?

A: My strategies are intended to be a fun and creative supplement to the amazing work that teachers do every day in the classroom rather than a way to supersede it. I aim to unleash the brainpower that is already inside people and help them see the potential they have in all subjects, not just math.

Additionally, I believe that people who have learned to love something when they are young more often than not will continue to love it and practice it for the rest of their lives. My hope is that this book will help parents and teachers change the attitude some kids have about learning, math, and memorization into a more positive one. I also hope that they come to appreciate the utility of forgetting in a whole new light that enhances their brainpower.

Q: Why does my son perform so well on homework but then struggle with test taking?

A: In a word: confidence. Once you make a mistake, it can haunt you for a long time. The first couple of times I did a show, if I made a mistake, I thought the show was done, over with, finished. I always felt that it was the end of the world. But I eventually learned to sustain—and more important, to nourish—my confidence. Fueling one's confidence amid mistakes and the occasional (serious) fall is easier said than done. But there are things you can do to help your son regain his confidence and nurture it for a lifetime of success—and challenges. It helps to start by sharing with him the ways in which he can prove he's smart while not under pressure. Teach him a few card tricks or mental math shortcuts that he can share with friends or in front of an audience. Help him produce a live show in front of family members and friends at your next informal dinner party.

Q: How can I motivate my daughter more?

A: First, realize that motivation begets motivation. When a kid gets her first A, that becomes her expectation, as well as her source of motivation every time she wants to achieve another A. While you want to help your child set realistic expectations, you also want to make those expectations as high as possible. Until she lands an A, she won't have that expectation.

Second, as you know by now, I'm a proponent of keeping learning fun, cool, and exciting. Get your daughter to love and enjoy what she has to learn. Use the strategies and games in this book to push her memory building. Help her organize her thoughts better. If you're helping her prepare for a test, go back to my exercises where I make it fun and cool and transport those concepts back to traditional schoolwork.

It's an attitude thing more than anything. I see kids who love a certain subject and who do so much better than other kids who are actually smarter but don't like the subject. If your daughter truly doesn't like a subject, you have to just make it more enjoyable for her. Create rewards for her—incentives for a job well done, or for at least trying. Unlike many adults, most kids are extremely open-minded and willing to try new things. Kids don't give up as easily as adults do, either. They will happily accept second and third chances. What's more, kids are used to having to do some things that they don't like. But still, if you can make even the most mundane tasks fun for your daughter, it will change everything.

Q: How can this system help someone who has autism, ADD, or learning disabilities?

A: I try to tell kids and adults that to learn a lesson, they must do it four, five, or six times until they've got it mastered (that is, they get it and get it well), then go out and show it off. For these individuals, this may be the first time in their life they feel smart. It's like running a marathon: Everyone will run it at a

difference pace but still arrive at the finish line. Of all the people I work with, those with disabilities are the ones who most often come back for more. They are so motivated and excited about feeling smart for the first time.

Q: My child is falling behind in school. What can I do?

A: Many parents who come to visit me after I've performed a show lament that their child has serious anxiety about math or is doing terrible overall in school, and they may tell me they've resorted to expensive tutoring to figure out "what's wrong" with their child and help him or her get up to speed with peers. But what I typically find is not that a child is delayed developmentally or that he or she isn't smart. Much to the contrary—and much to the parents' relief—all that's missing usually is a little confidence and help with focusing. (Do I sound like a broken record by now? I know I've been harping on these issues for the greater part of this book, but they must and should be repeated.)

Unfortunately, tutors rarely teach kids how to learn. They review what the child is supposed to retain but offer no help in effortlessly retaining that information. And that's what I'm teaching here. The other problem with tutoring is that private teachers charge, on average, $75 an hour—so at six hours a week, which is customary, parents are paying roughly $450 per week, or close to $20,000 a year! (Tutors at some private schools can cost upward of $35,000 a year—in addition to the tuition.) That's a lot of money that few families have at their disposal.

Try this exercise: Create a random two-hundred-digit number and have your kid memorize it, just as my son did. At bedtime, do one or two numbers at a time. Every night or every morning, add another number. Help your kid find a strategy that works to keep the growing number in his or her head. Try this exercise with letters, too. Or numbers and letters. Mastering all two hundred digits will make your kid feel like he or she can do anything!

Q: I'm a teacher who loves this memory system. But how can I teach these ideas without my students losing interest in the traditional route, especially when it comes to math?

A: Even though my book outlines shortcuts and untraditional ways of arriving at solutions to problems, especially in the math department, I'm not suggesting that the traditional methods do not have value. Much to the contrary, students need to learn how to add, subtract, multiply, and divide in the usual manner before they can fully appreciate and master the shortcuts. They also must have their multiplication tables down flat. All of my strategies act as supplementary and complementary material to whatever it is you want to teach, whether it's traditional arithmetic, history, complex calculus, or even carpentry. They are geared to help students optimize how they learn and to take the "overwhelming" factor out of the learning curve.

One way you can teach memory strategies and foster a classroom of students who learn to think on their own and to manipulate concepts from various sources is to send them home with a list of twenty items. This list can encompass any subject matter, from pop culture (such as a list of the top movies of the century or favorite restaurants) to an academic list of biology definitions or important historical events. Instruct them to go home and find a clever way of memorizing the list in a certain order. The following day, have each student share how he or she created a memory technique . . . and suddenly you'll have a whole new collection of unique memory strategies homegrown from your homeroom!

Q: I've heard that certain television shows and videos are "bad" for young kids' developing brains. What do you think of that? Can some TV shows and videos turn preschoolers' minds to mush?

A: Kids should be introduced to numbers and patterns as soon as possible, long before they can learn their multiplication

tables, and this can be achieved without any use of a television or computer. I also believe that children need to be introduced to certain programming when their brains are equipped to handle the information appropriately. These days, kids typically start watching television at four months of age; the average preschool kid watches more than ninety minutes of television a day.

As I was piecing this book together, a new study emerged that said it's not only how much but also what they're watching that can have an impact on children's attention spans. The study, published in the *Journal of Pediatrics*, explored how fast-paced programming can affect what psychologists call executive functioning, which is your ability to stay on task and not be distracted. More technically, executive functioning is a collection of skills that govern how we behave and that involve working memory, delayed gratification, and problem solving—all the skills we need to function well. Executive functioning is what allows us not only to remember things and solve problems but also to plan. This particular study looked at 60 four-year-olds and broke them into three groups. One group watched a nine-minute clip of *SpongeBob SquarePants*; a second watched a nine-minute clip of *Caillou*, a realistic PBS cartoon about a preschool boy; and the third group drew pictures for nine minutes instead of watching television. Immediately afterward, when the researchers tested each group's executive functioning, they found that the PBS-viewing and picture-drawing groups performed equally well on the tests. The *SpongeBob* group, however, scored significantly worse—the implication being that watching a full half hour of a fast-paced cartoon show could be detrimental to a preschooler's executive functioning. The researchers speculated that *SpongeBob*'s more rapid pace and fantastical characters—such as a talking, pants-wearing kitchen sponge who lives under the sea—might be too much for preschoolers' brains to take in. Granted, *SpongeBob* is not intended for this audience, but many parents still expose their young ones to these programs from a

very early age. As parents, the question we really should be asking ourselves is: How can we prepare our youngsters to build this executive function?

According to the experts, one answer is by promoting good old-fashioned play, which entails many skills I've outlined in this book—getting kids to use their imaginations, be creative, focus and concentrate, and listen to and follow directions so they can reach a goal. Educational, age-appropriate programming might have a positive effect, but the key term here is "age-appropriate." (The American Academy of Pediatrics recommends that kids under age two not watch any television.)

The other thing to bear in mind is that we need to set good examples. As adults, we're constantly trying to do too many tasks at once, such as texting, being on the computer, and talking on the phone all at the same time. Kids mimic their parents, and unless we teach them how to focus and concentrate on one task at a time, especially during those formative years when the brain is developing, we're not preparing them optimally to establish lifelong good habits and behaviors.

APPENDIX B

Additional Games to Engage Everyone from Nine to Ninety-nine

Plus Tricks to Amaze Your Family and Friends

Learning is not compulsory . . . neither is survival.

—W. EDWARDS DEMING

This appendix is meant to supplement all the chapters in the book and provide additional exercises that will reinforce the six essential skills. These exercises aim to work your brain in ways that maximize its fullest potential while making the process entertaining and engaging.

Whether you're playing with a nine-year-old or a ninety-nine-year-old, the goal is to extinguish any anxieties you may still have about math—and learning in general—and to increase your chances of success in all that you do. I'll start with fun games for everyone, and then I'll mention a few games that specifically help kids empower their minds so they have the greatest chance to succeed academically. Note, however, that kids aren't the only ones who can play these super-kid-friendly games. You might find these tricks enjoyable to try out yourself on friends and family at your next social gathering. They'll leave you feeling like the smartest person in the room.

GHOST

This game is best for just two players. The object is to outwit your opponent by thinking two or three steps ahead. Here's your chance to put all your spelling, vocabulary, and organizational skills to good use. It gets easier the more you play, so give it a try.

How to Play

Player 1 thinks of a word that he keeps to himself. He then tells player 2 the first letter of that word. Player 2 now thinks of a word starting with that letter and then tells player 1 what the second letter in that word is. It's then player 1's job to think of a word starting with those two letters. He then tells player 2 the third letter of this new word. Once a word is four letters long and a player says a letter that forms this into a full word, that player loses and has to record a G. The first person to do this five times and record G-H-O-S-T is the loser.

Here's how to challenge and outwit your opponent. If you say a letter and your opponent thinks that he can't use this letter to think of a word, he's allowed to challenge. If you then can't think of a word, you get a G. If you can, your challenger loses and gets the G. Let's take an example:

- Player 1 comes up with the word SUPER and says the letter S.
- Player 2 thinks of STOMACH and says the letters ST.
- Player 1 thinks of STAND and says the letters STA.
- Player 2 thinks of STAMP and says the letters STAM.
- Player 1 thinks of STAMMER and says the letters STAMM.

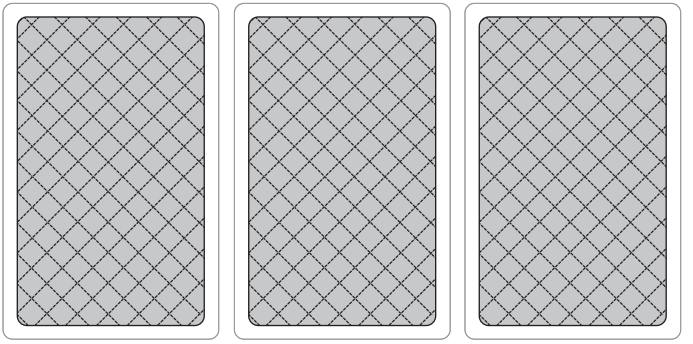
If player 2 is stumped at this point, she would challenge player 1, who would state STAMMER. Player 2 now has to re-

cord a G. But if player 2 does think of STAMMER, she would say S-T-A-M-M-E. Now it's player 1's job to think of another word, because if he spells out STAMMER he will lose. Player 2 took control of the word. It's strategy in action. So the name of the game is trying to outwit your opponent and get him to finish spelling the word.

THREE MISSING CARDS

Throwing a party this weekend? Then master the art of this one beforehand, and when people look like they need a new form of entertainment late into the evening, bring out a deck of cards.

To perform the following, have a full (without the jokers), newly shuffled deck of cards in your hand facedown. Pick three people and have them sit across from you at a table. Each person will pull a card out of your deck and look at it (without showing you), and then you'll place each card facedown in front of each respective person. You can even designate each person with their card: person 1's card, person 2's card, and person 3's card. I'll use this labeling system in describing the rest of the trick. Here's what we have so far:



Now you're ready for the trick:

Step 1: In front of player 1's card, put ten cards facedown. This is pile 1.

Step 2: In front of player 2's card, put fifteen cards facedown. This is pile 2.

Step 3: In front of player 3's card, put fifteen cards facedown. This is pile 3. Take the leftover cards (there should be nine in total) and put them aside for now. This is your "unused" deck.

Step 4: Pick up player 1's card and put it on top of pile 1.

Step 5: Pick up pile 2 and ask someone in the audience to give you a number between 1 and 14. Let's say someone shouts out, "Seven." What you'll do is count out seven cards from pile 2 and place them on pile 1. Put the remaining cards in pile 2 back down. Pick up player 2's card and place it on pile 2.

Step 6: Pick up pile 3 and again ask someone in the audience for a number between 1 and 14. Let's say this time someone shouts out, "Five." You'll count out five cards from pile 3 and place them on pile 2. Put down pile 3. Pick up player 3's card and place it on pile 3.

Step 7: Take the unused nine cards and place them on pile 3. Now take that new pile 3 and place it on top of pile 2. Pick up this new pile 2 and place it on pile 1. You should have a full deck again.

Step 8: Make two piles by going through the deck like this—one card face*up*, one card face*down,* one card face*up*, one card face*down*. . . . Go through the entire deck until you have one faceup pile and one facedown pile.

Step 9: Get rid of the faceup pile. You don't need these cards anymore.

Step 10: Repeat steps 8 and 9 with the remaining deck. Don't forget to get rid of the faceup pile.

Step 11: Repeat steps 8 and 9—but this time switch the order of your pile-making so it goes like this: one card face*down*, one card face*up*, one card face*down*. . . . Rather than start your pile-making going up-down-up-down, you're going down-up-down-up. Once you've created your piles this time, get rid of the faceup pile, as you did previously.

Step 12: In this last step, you'll once more set out two piles starting with a faceup card, but you'll place all of the facedown cards in front of your players. These cards will be the original missing cards!

This trick is a lot easier than it plays out on paper here. To see a video of this trick in action, go to www.MikeByster.com and watch how it's done. Then you'll be able to remember the steps and do this trick yourself.

BIZZ-BUZZ

This game is great for a group of people. Position your friends in a circle. Designate someone as the starter (that can be you), who begins the game by saying the number "1." Going around the circle, each person will call out the next number in sequence. So the second person in the circle will say "2," the next person will say "3," and so on. But here's the catch: certain numbers cannot be said. The banned numbers are:

- Any number with a 7 in it, such as 47, 67, or 73
- Any multiple of 7 (7, 14, 21 . . .)
- Any digits that add up to 7, such as 25 (2 + 5 = 7)

If one of the banned numbers comes up when it's your turn to say a number, you say "Buzz" instead. If you say the banned number, you're disqualified and must step out of the game. The goal of the game is to reach a high number, and the last person in the circle wins!

This game can be played at different levels of intensity and difficulty. For instance, you can up the ante and add another set of banned numbers; that's where the "Bizz" part comes into play. You'll say "Bizz" for certain numbers and "Buzz" for others. It all gets even trickier when you have to account for numbers that could go either way. For example, if you designate all numbers with a 7 in them as Buzz numbers and all multiples of 7 and digits that add up to 7 as Bizz numbers, then there will be times when your number meets the criteria for both kinds of banned numbers, in which case you say "Bizz-Buzz." Once this game speeds up to a rapid-fire pace, you'll be surprised at how many times the players happen upon a random number combo that they don't catch as a Bizz-Buzz moment.

676 COMBINATIONS

Did you know that there are 676 combinations of three-letter words with one letter in a certain spot? I know, it sounds impossible, but it's true. According to the mathematical rule of combinations, the fact that there are 26 letters in the alphabet means that there are 26 times 26 different combinations—and potential words—that can be created if one letter remains constant in all of those combinations. Don't panic if this sounds confusing. Once you go through the motions of this game—which gets your mind thinking *fast*—you'll understand what I mean as your mind spins through the combinations.

You need just one partner, a piece of paper, and a writing implement.

Below are two piles of "clues":

A E D L N R S T

1 2 3

What you'll do is pick one letter from the top row and one number from the bottom row. Let's say you choose the letter *L* and the number 1. Now you have to try to come up with as many three-letter words as you can that start with the letter *L* (in other words, that have *L* in the first position), as in:

LAB
LAD
LAG
LAP
LAM
LAW
LAY
LEG
LET
LID
LIE
LIP
LIT
LOB
LOG
LOP
LOT
LOW
LUG
LYE

Or let's say you choose the letter *R* and the number 2. The list begins:

ARC
ARE
ART
BRA

CRY
DRY
ERA
ERG
FRY
IRK
ORE
ORT
PRO
PRY
TRY
URN
WRY

Ideally, this game is played with a partner and you time each other. The person who can create a comprehensive list of words from the same set of clues in the shortest amount of time wins!

HOW DID YOU DO THAT?! IS SEEING BELIEVING?

The next trick I am going to teach you wouldn't be complete without a brief tangential discussion of optical illusions (not that I want to give away my trick before explaining it!).

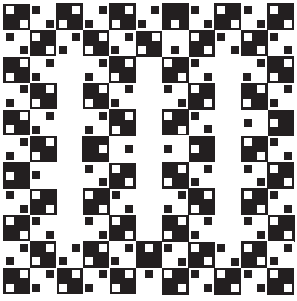
The following images illustrate that we cannot always trust our visual perception—what we see isn't always what we get! The components of an object can distort the *perception* of the complete object. In other words, our brains can interpret what we see differently from what's really there, for several reasons. For one, there can be design elements or background patterns that affect how our eyes see a certain image. Or we can be thrown off as a result of thinking about what we *should be* seeing versus what's right in front of us. How we perceive things has a direct correlation to how we react. Games like bingo and poker provide only partial information, and the players have to make decisions

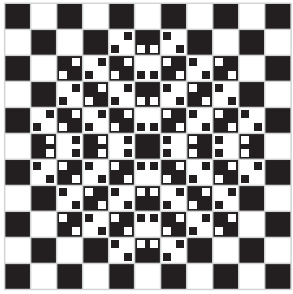
based on their intuition. A hand can be perceived as either weak or strong depending on the strategies used to intimidate opponents, such as betting and bluffing.

Optical illusions have been studied for millennia. The ancient Greeks used a technique known as *entasis*, which incorporates a slight convexity in the columns of the Parthenon to compensate for the illusion of concavity created by parallel lines. Psychologists and artists alike have popularized many of the following illusions, which you'll find at various Web sites that talk about optical illusions and how incredibly challenging they can be for the brain. For more of these, I encourage you to check out www.scientificpsychic.com/graphics and http://en.wikipedia.org/wiki/Optical_illusion. And for an incredibly trippy optical illusion in action, Google "the spinning dancer." If you perceive the dancer's foot touching the ground to be the left foot, she appears to be spinning clockwise; if you see the foot touching the ground as her right foot, then she appears to be spinning counterclockwise!

WARPED SQUARES?

There are no curved lines in these figures. You can use a ruler to check it out. The diagonal patterns created by the tiny squares distort our perception of the figures.





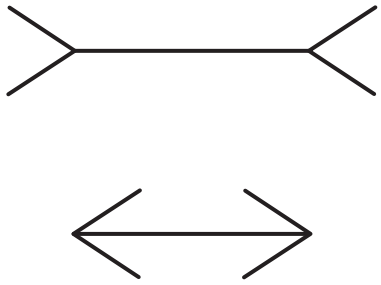
WORD COLOR TEST

For this exercise, get out a piece of paper and a set of markers. Using a green marker, write the word YELLOW at the top. Using a red marker, write the word BLUE beneath the top word. Continue down the page: using a blue marker, write the word ORANGE; using a yellow marker, write the word BLACK; using a purple marker, write the word RED; and using an orange marker, write the word GREEN.

Now, do not read the words, but say aloud the *color* of each word as you look down your list of words. How hard do you find it to say the correct color and not be distracted by the word itself? This is a type of psycholinguistic test that poses some difficulty because the portion of the brain that handles language has the conflicting tasks of verbalizing the color of the written words while ignoring the meaning of the words representing colors.

VERTICAL LINES

Let's try one more.



Do you think the vertical lines are the same exact length or different? Turns out that they are the same length. Our eyes cannot always be trusted (nor can we always trust the part of our brain that tries to accurately interpret what our eyes are seeing), and there are lots of tricks to be played based on this weakness.

GOTCHA!

One of my favorite crowd-pleasers is Gotcha. Here's how to dupe your best, smartest friends.

Ninety percent of people will fall for this card trick. Your victims—ahem, audience—might think you're playing with a fixed deck, but they won't think that you've fixed the deck in the way I'm going to tell you to fix it. So yes, for this trick you'll need to rig a deck of cards such that the first four cards off the top of your facedown deck are:

- the 9 of spades
- the 8 of clubs
- the 9 of clubs
- the 8 of spades

Perhaps you already see the pattern, but hang on a second. What you'll do is ask someone to take the top two cards from your facedown deck, look at them in private, and then return them to anywhere in the deck, which you'll fan out for them in your hand. Say something like "Abracadabra" over the deck, or maybe smash the deck behind your head and flip through it without shuffling them. Then turn over the top two cards, show them, and ask: "Weren't these your cards?" These two cards won't be the exact cards they first chose, but they will be similar enough that your audience won't know the difference. They'll think that you've actually rigged the deck to have two 9 of spades cards and two 8 of clubs cards and that they are looking at the same exact cards they first pulled. In other words, their mind won't instantly say, "Oh, I must not have looked at the suit carefully."

How does this happen? The numbers and colors are too close for the mind to quickly distinguish. Obviously, you could do this trick using any set of four cards that are close in color and looks, such as a 9 of hearts, 8 of diamonds, 8 of hearts, and 9 of diamonds. Once again, your victim won't be able to register the cards exactly in terms of suit and number—unless he or she is paying exceptionally close attention or has a hunch that you're bending the mind in this unique way.

THE SHOE GAME: "REMEMBER WHEN . . . ?"

This game—an updated version of the classic *Newlywed Game*—works best when it's played among couples who know each other pretty well. Each couple pair is a team, and one other person needs to be the leader and cannot be part of a team.

Now, position each couple back to back; they can be sitting down on the floor or in chairs. Each person holds a shoe from his or her partner in addition to his or her own shoe. So if I'm playing this game with my wife, she'll hold one of my shoes and

one of her own shoes in her hands, while I hold one of hers and one of mine in my hands. We can't see each other because our backs are lined up. The leader starts by asking a series of questions related to who is better or worse at particular tasks. The players respond to each question by holding up the shoe of the person they think is better or worse. Let's say the question is, "Who is the better cook?" If my wife and I hold up the same shoe, then we're in agreement and we win a point. If we don't agree, our shoes won't match and we don't get any points. After a round of twenty questions, the couple with the most points wins.

Below is a list of questions that can be used. The leader is encouraged to make up other questions as well, especially as they pertain to the group at hand.

1. Who is the better cook?
2. Who is the better driver?
3. Who is on time more often?
4. Who loses their temper more easily?
5. Who is sloppier?
6. Who is in the mood for fast food more often?
7. Who was more nervous on your first date?
8. Who is funnier?
9. Who worries more?
10. Who is in better shape?
11. Who sleeps better?
12. Who is more thoughtful?
13. Who is handier?
14. Who is the better athlete?
15. Who has the bigger brain?
16. Who takes longer to get ready?
17. Who does more work around the house?
18. Who has better taste in clothes?
19. Who has the better pulse on pop culture?
20. Who sings with a better voice?

How does this game improve your mind? These questions are designed to stimulate your memory and plunge your mind back in time. You'll find that these types of questions force you to recall situations and events in your life to validate your response. If you and your partner disagree on an answer, explain to your partner why you answered the way you did. Think back and cull the details and facts you need to make your case. This isn't about fighting over a response—it's about being able to quantify and qualify your memories.

Many of us don't reminisce unless we're forced to. But when we do, we're actually working our brains in ways that can help us optimize their functionality. The mere act of pulling data from the farthest reaches of our brains taps all the six essential skills (focus, concentration, information retention, thinking outside the box, organizing, and even forgetting). It also verifies the full extent and power of your brain. As I've been reiterating throughout this book, the mind can retain and work with much more information than we typically think it can. We just need to push it to unleash its fullest potential. Games like the ones in this chapter help you do just that.

MEMORY MONSTER GAME

One of my favorite mind-sharpening exercises is to take an ordinary sentence, assign three letters to most of the words in the sentence, and try to memorize all the letters in a few seconds. It's a great mental exercise because it teaches you how to process information quickly. Plus it helps train your mind to work with patterns and use mnemonic devices.

On the next page are four sentences and a list of three-letter sequences that correspond to them. The smaller words that aren't as critical for recalling the sentence—such as the pronouns (*my*), prepositions (*on*), and articles (*the*)—are not included; hence they are not shown in all-caps here. Pick one of these four sentences

and try to memorize it and its nine three-letter sequences—then turn the page and see if you can recall all nine sequences!

1. ATE DINNER WITH my PARENTS at a RESTAURANT. WAITER POURED COFFEE on my FATHER.
2. PLAYING VIDEO GAMES, TRYING for WORLD RECORD. My BROTHER UNPLUGGED the MACHINE.
3. SKATEBOARDING down the SIDEWALK, FLIPPED OVER, but LANDED TOTALLY on my FEET.
4. I was WATCHING TV'S ALONE; my mom YELLED PICK UPA your CLOTHES. I SAID LATER.

Sentence 1	Sentence 2	Sentence 3	Sentence 4
AIT (ate)	PLI (playing)	SKE (skate)	WCG (watching)
DIN (dinner)	VIO (video)	BOR (boarding)	TVZ (tvs)
WTH (with)	GMS (games)	IDE (side)	ALN (alone)
PRS (parents)	TRG (trying)	WAK (walk)	YED (yelled)
RET (restaurant)	WRL (world)	FPD (flipped)	PIQ (pick)
WAI (waiter)	REC (record)	OER (over)	UPA (upa)
POR (poured)	BRT (brother)	LDE (landed)	CLS (clothes)
CFE (coffee)	UNP (unplugged)	TOL (totally	SED (said)
FHR (father)	MCH (machine)	FET (feet)	LET (later)

Okay, so working with one sentence at a time, try to remember all of the letter sequences in each one. You can recite it out loud or write it down.

1. _____, _____, _____, _____, _____, _____, _____, _____, _____.
2. _____, _____, _____, _____, _____, _____, _____, _____, _____.
3. _____, _____, _____, _____, _____, _____, _____, _____, _____.
4. _____, _____, _____, _____, _____, _____, _____, _____, _____.

How well could you do this? Did you look back to find letters that you missed? Obviously, the pattern that you're supposed to identify is the use of letters that convey a whole word without using the entire word, and using only those words that communicate the main thrust of the sentence. So as your mind is having to go back to that original sentence, it's simultaneously picking out the chosen letters in an organized fashion. It's doing this task over and over again, as if jumping through hoops. This back-and-forth mental motion is the equivalent of a pencil sharpener. The chronic yet intentional maneuvering of your thoughts hones your mind and fuels its processing speed.

BUILD CONFIDENCE WITH NUMBERS

Attention, parents of kids younger than ten: confidence building cannot start early enough in life, especially in the math department. Number awareness in young children can set the stage for a lifetime of success. Simply encouraging kids to count the stairs as they climb or descend, or to count the sugar packets on a restaurant table, are wonderful exercises that don't require serious math. And here's a trick you can teach anyone who can count to 10. I'll explain how it works as if you're performing the trick, and then once you learn it you can teach your youngsters in your own words.

First, take out a sheet of paper and create three columns that look like this, making sure you use the numbers provided—do not change anything or the trick won't work!

Column A	Column B	Column C
124	244	316
322	343	118
223	145	217

Now find ten pennies and put them into a pile. Pick a three-digit number from each of the columns above. Let's say you choose the numbers 124, 343, and 217. The goal is to add these numbers up quickly, which will be an impressive feat for someone who can only count to 10!

Obviously, you're not going to actually "add" the numbers up traditionally. And you're not going to use a calculator. You're going to apply a shortcut that works with these particular numbers.

To start, what you'll do is look at the hundreds digit from each of the three numbers, and then pull pennies from your pile

to create a new pile based on those numbers. For example, in the number 124, the number 1 occupies the hundreds digit, so you'll take one penny from your pile and start a new pile. Then you'll do the same for the next number, 343, whose number 3 occupies the hundreds digit. So you'll remove three pennies from the original pile and add them to the new pile. Repeating again with the third number, 217, you'll remove two pennies from the old pile and place them in the new pile. Now you're ready to find your answer using the final three steps:

Step 1: Ask yourself: how many pennies are in the new pile? Answer: 6. We got six pennies because we moved 1 + 3 + 2 over to the new pile. This is the first number in the answer.

Step 2: Remembering that the middle number is always 8—always!—now ask yourself: how many pennies are left in the old pile? Answer: 4. This is the third and final number in the answer.

Step 3: Now you just have to figure out what the first and last numbers are based on steps 1 and 2. Hence, 124 + 343 + 217 = **684**.

When you teach a young one how to perform this shortcut, obviously you'll want to avoid using the terms "hundreds digit" and "ones digit"; you can simply tell them to look for the "first number" or the "third number" in each three-digit number. Your youngster will also want to ask the audience to choose which three numbers to add. Doing this trick in front of several people can be a huge crowd-pleaser. When adults watch a child add three big numbers like that, they are impressed and the child gains a lot of positive reinforcement to his or her self-esteem.

My son and I rarely share a quiet ride in the car. We're constantly engaging each other's mind on some crazy level. It's rewarding for me to be able to interact with him in such an innovative manner that not only strengthens our bond but also manages to spin my own brain around in fun and stimulating ways. Here are two of our favorite games—no pencil, pen, or computer required. Try them the next time you're traveling with children!

Have a Conversation Without a Certain Letter in It

In 1939 a novel by Ernest Vincent Wright was published that was called *Gadsby* and whose subtitle says it all: *A Story of Over 50,000 Words Without Using the Letter "E."* That's right: this man wrote an entire book without ever using the letter *e*! Hard to believe. Though self-published and little noticed in its time, the book is a favorite of fans of what's called *constrained writing* and is a sought-after rarity among some book collectors.

I had never heard of constrained writing until I was doing some research on this unusual tome. Or at least, I never knew that there's an official term for the literary technique whereby the writer is bound by some condition that forbids certain things or imposes a pattern. Such constraints are very common in poetry, but they also are what give us many of the devices I've talked about in this book—namely, palindromes, acrostics, and anagrams. All of these are prime examples of constrained writing in action.

So I guess you could say that my son and I enjoy the art of constrained conversation. That is, we like to conduct full conversations that abide by certain rules, one of which is just what Mr. Wright did when he penned his book: avoiding the letter *e*. Here's how one of these exchanges might unfold:

"Josh, how was school today?"

"Not bad, Dad. But my instructor was boring."

"Josh, I don't want to say this, but you cannot drop out of school if your instructor is boring."

"Why not? What kind of law is that?"

"Josh, I know it's not fair. But that's how it is."

Try it sometime! You can make this game as easy or as hard as you like based on the rules you enforce. The one who breaks the rule first loses.

Have a Conversation in Which Each Sentence Has Only Five Words (And It Must Make Sense!)

This game is a variation on the same theme as the previous game, as it entails conducting a conversation based on a preset rule or set of rules. For example, you could conduct a conversation like the one below in which each sentence can only be five words long:

"Let's go to the park."

"I don't want to go. The park is so lame." (Two distinct sentences, each with five words.)

"Josh, I love the park. What are you talking about?"

"Dad, it's the twenty-first century."

"Let's go to the beach."

The sky's the limit when it comes to what kinds of rules you want to impose. Just be sure to keep it challenging and, above all, fun.

PRODUCE A SHOW

I'm also a big believer that everyone needs to be famous—for something! All people, kids especially, need a way to show off once in a while. It builds confidence and self-esteem and encourages them to perform in ways that will help them interact successfully with the world for the rest of their lives.

Here are two tricks that you can teach your kids before helping them put on a "magic" show at home in front of family and

friends. Trust me, these tricks will impress the most educated folks in the room. Teachers, too, can facilitate such shows in the classroom, just by choosing a student to be the star of the show (or two students, in the case of the Magic Box) and taking them through the how-tos of performing these tricks, either after school or when everyone else is at recess.

You can embellish this activity by devising a makeshift stage in the living room or den and dressing your kid up in wizardly clothes, which you can find in any costume shop. The goal is to make your child, who has some amazing skills to display, the center of attention. Not only will having to memorize the steps in each trick work your child's brain, but the challenge to perform in front of a live audience and shoulder the stress of being "onstage" will be a learning experience in itself.

I'll explain both tricks to you as if you were learning them yourself. Once you've got the steps to these tricks down, work with your child to explain them in your own words, coming back to these explanations as necessary. I'll start with the easier trick of the two.

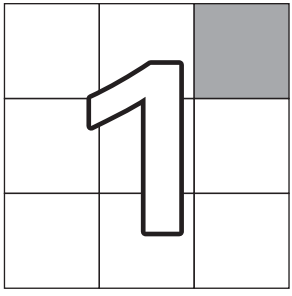
The Magic Box Mind-Reading Trick

Lots of simple tricks seem mysterious and inexplicable to those who are not in on the secret. This one is great crowd-pleaser for two people to try on a group of people. Start by putting the numbers 1 through 9 in a three-by-three box, like this:

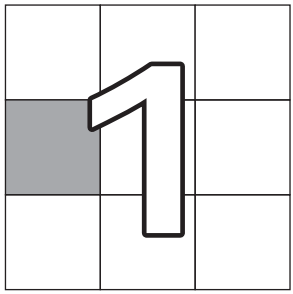
1	2	3
4	5	6
7	8	9

Ask someone to be your secret partner. This person will already know the trick, because you will teach it to him or her beforehand. When you begin the trick, have your partner leave the room (or turn around) so that when someone else in your audience silently picks a number, your partner won't know what it is. Using the trick, your partner will be able to guess the number that was chosen. Here's how it's done.

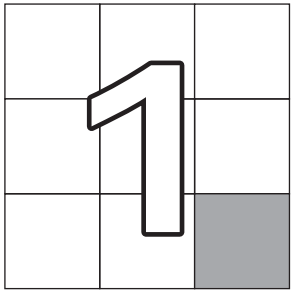
- With your partner looking away or out of the room, ask someone in your audience to hold up a number from 1 to 9, using his or her fingers. This is the secret number. Now ask your partner to turn back around or return to the room.
- Begin by pointing to the number 1 box and asking your partner, "Is this the number?" But when you touch this first box, make sure you touch the *subsection* of that box as though it were a miniature version of the three-by-three grid. In other words, if you were to break down the number 1 box, it would look like this:



Number 3



Number 4



Number 9

- The shaded areas indicate where you'd point in the first box to immediately clue your partner in to what the secret number is on the larger grid.
- Continue pointing from box to box until, when you reach the correct one, your partner says, "Yes, that's the one!"

The Black Horse Trick

Similar to the Magic Box Mind-Reading Trick is the Black Horse Trick. Again, pair up with a secret partner, as you did before. In fact, you can even say, "Now we're going to perform the same trick—but without touching the number at all!" Just a few words spoken by you will let your secret partner know the correct number. Here's how it works:

Set up two words in advance that correspond to a set of num-

bers. Here we use BLACKHORSE, where each letter symbolizes a number from 1 to 10. Note that these words have no repeated letters.

B	L	A	C	K	H	O	R	S	E
1	2	3	4	5	6	7	8	9	10

When your partner comes back into the room, say something like, "All right, try to guess this one." The key is that the first letter of the first word you say will correspond to the correct number—in this case the number 3. A question such as "So, you really think you know it this time?" would signify the number 9! Anyone you play this trick on will certainly be begging you to tell him how you managed to pull it off. Not only does it work every time, but it employs lots of brainy activity. You're forced to come up with a crafty sentence to convey to your partner what the number is, and you also have to remember the BLACKHORSE code. Just don't start counting on your fingers or your audience might catch you out. As your mind thumbs through the letters of the word and translates them into the numbers, you have to inwardly juggle information that ultimately exercises those mental muscles.

The Missing Number Trick

This is an extremely cool trick, but one that does require focus and concentration. You'll probably have to take yourself through this a few times before you teach it to others.

I like the Missing Number Trick because it is easy to do and you can do it over the phone. People will believe you are psychic after you do this trick for them. There are several ways to perform it, but I will teach you just one. All you need to be able to do to perform this trick is to follow a few simple steps, add up some one-digit numbers, and know the multiples of 9 up to 36. Here are the steps:

Step 1: Have someone type a three-digit number into a calculator.

Step 2: Ask that person to add up the sum of the digits and subtract it from the original number.

Step 3: Have him or her multiply the new number by a whole different three-digit number.

Step 4: Have the person circle one of the digits in the final answer—any digit except a 0—and then read you the rest of the digits, but not the circled number. After he or she reads them to you, you can announce what the circled number is.

If the person follows all the directions correctly, the sum of all the digits, including the circled number, will have to add up to a multiple of 9 (9, 18, 27, or 36). Here's an example of the trick using actual numbers:

Step 1: The person types a three-digit number into the calculator (836).

Step 2: The person adds up the digits of this number (8 + 3 + 6 = 17) and then subtracts the total from it (836 – 17 = 819).

Step 3: You multiply the new number by another three-digit number (819 × 523 = 428,337).

Step 4: Have the person circle one of the digits in the final answer—except for any 0's—and then have him read you all the digits except the circled number. So, if the person circled the 2, he would read you "4, 8, 3, 3, 7," and as he read, you would add up the numbers (4 + 8 + 3 + 3 + 7 = 25). The next-highest multiple of 9 after 25 is 27, and you know that the sum of *all* the digits, including the missing number, has to equal a multiple of 9; since 25 + 2 = 27, the missing number is 2.

Say the digits the person reads you already add up to a multiple of 9, like 3 + 2 + 4 + 1 + 8 = 18. The missing number in that case can be either a 0 or a 9, since 18 + 9 = 27. You told the person not to circle any 0's, so you know the missing number must be a 9.

The key is to memorize directions so you can explain what you're doing to your audience and do a little mental math. Those are the only requirements for successfully performing this trick.

FEELING SUPER SMART YET?

Productive thinkers rarely rest on their laurels. Once you've mastered all of the strategies and exercises in this book, seek out more ways to bend your mind and keep it in tip-top shape. Don't forget to go to www.MikeByster.com for online resources and videos.

Maintaining a sharp, fast mind requires constant attention and work. Just as bodybuilders never stop lifting weights and watching their diets, none of us can let our brains just sit there. The encouraging news is that you don't have to go far to engage your mind in ways that support and expand its power. I hope I've given you plenty of ideas that you can use throughout your daily life. No computer or playing partner is required. All you need is your own thinking brain and its well-groomed skills to turn any everyday experience into an effortless path to a smarter, wittier, brainier, and brighter you.

THE POWER OF FORGETTING

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