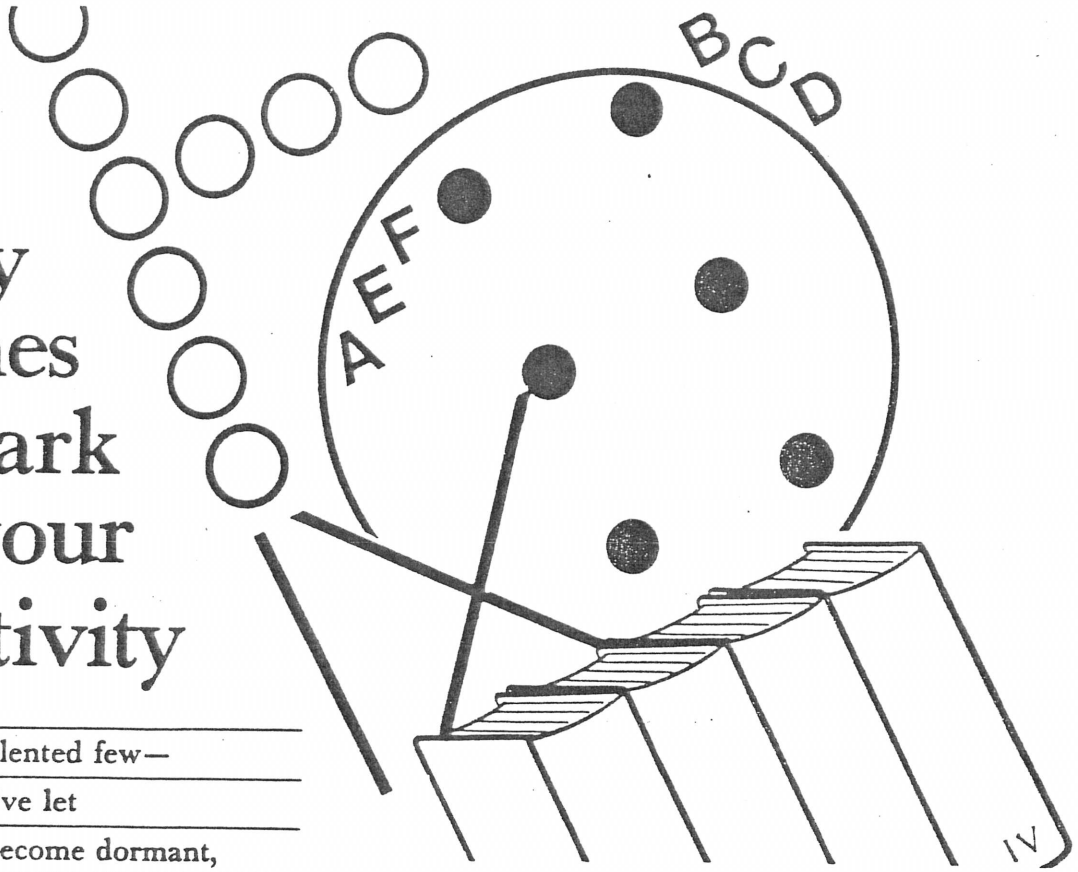
Play games to spark your creativity



All of us—not just a talented few—can be creative. If you've let your creative powers become dormant, these exercises will expand your mind and rekindle your imagination.

Eugene Raudsepp, Princeton Creative Research Inc.

☐ People who think they lack creativity tend either to revere it as a mysterious, unattainable gift, or to dismiss it as an impractical luxury. Fortunately, such inhibiting attitudes are wrong.

Recent research has proven that creativity is almost universally distributed, and that it can be revived in those of us who seem to have lost it. Furthermore, training programs have demonstrated that creative problem solving can be learned and strengthened.

Creative strength through exercise

As with muscles, creative power can be enlarged and revitalized by exercise. In fact, creativity thrives on exercise; without it, creativity withers.

The mental exercises presented in this article are designed to (1) reanimate and develop all the facets of your creative behavior, including your problem-solving ability, and (2) provide you with insights into the kinds of difficulties you face as a problem solver, and show how these can be overcome.

You will realize both benefits if you give the exercises your full attention. Don't race through them to see how they come out. There is usually not a single "right" answer to the problems or puzzles. Rather, each game is intended to demonstrate an important point that you ought to ponder before going on to the next challenge.

Try not to involve your ego, or become discouraged if you feel you have not done well. Many times, the best way—often, the only way—to learn creative problem-solving is through mistakes. Furthermore, these games should not be regarded as tests, or yardsticks, against which to measure yourself. Their sole purpose is to enhance your creative problem-solving skills.

Fun and profit for you

You will find these games fun to complete, because really using your imagination is enjoyable as well as exciting. If you tackle them conscientiously, you could improve your creative skill for solving problems by at least 30%, and perhaps as much as 280%.

At the turn of the century, philosopher William James estimated that a normal, healthy, productive person functions at 10%, or less, of his or her capacity. Ten years ago, anthropologist Margaret Mead set this figure at 6%. More recently, psychologist Herbert Otto placed it at 4%. Whatever the exact percentage, it is clear that we function at only a small fraction of our potentials.

In any event, these exercises will have done their job if they convince you—whatever your age, background, education—that further creative growth in both your personal and professional life is possible and can be pleasurable.

This article is based on excerpts from the author's book "Creative Growth Games," which can be ordered directly from Princeton Creative Research, Inc., Dept. NR, P.O. Box 122, Princeton, NJ 08540 ($4.45).

(Games start on next page)

The author

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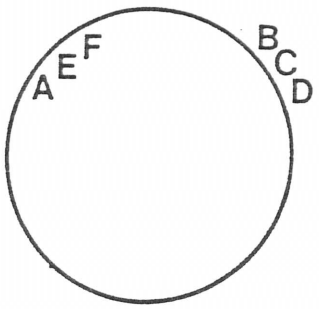
1 In-and-out letters

We live in a complicated age and look for complicated solutions—when frequently what is simple would work better.

Creative solutions to problems are often elegantly simple, and even obvious—once seen. Yet, it is the "obvious" that frequently escapes our notice because we have been conditioned to look for complicated solutions when solving problems.

The problem: Determine the system being followed to place letters inside or outside the circle (i.e., where does the rest of the alphabet belong?).



2 Draw your watch

We don't observe things with which we are most familiar.

Creativity requires exact, retentive observation, the discriminating application of our senses.

The problem: On a piece of paper, draw the face of your watch without looking at it.

3 Simple arithmetic

The creative person spends more time formulating and analyzing his problem before attempting a solution; the less creative person wants to "get on with it."

This exercise is the only one that you solve against a time limit. Although creative thinking usually isn't done best within a specified time, our hurried environment frequently imposes this restriction.

See if you can find a way to beat this problem before you tackle it. Sometimes, you have to be able to step back from a problem to see what's involved.

The problem: In the following simple arithmetic problems, the plus (+) sign means to multiply; the divide (÷) sign means to add; the minus (−) sign means to divide; and the multiply (×) sign means to subtract. See how many problems you can complete in exactly one minute.

7 + 2	8 ÷ 4	6 + 5	8 ÷ 4	6 + 11
20 − 10	7 × 7	9 + 3	5 × 2	8 − 4
9 ÷ 3	2 ÷ 2	8 ÷ 4	6 + 6	9 + 2
12 × 2	15 − 5	4 × 3	20 + 2	20 − 10
6 × 5	15 − 3	16 ÷ 8	15 ÷ 5	5 ÷ 5
10 + 2	7 × 5	9 × 2	10 − 5	5 ÷ 1
10 ÷ 10	8 ÷ 2	4 × 2	8 + 3	10 − 2
4 − 2	15 − 3	9 ÷ 3	16 × 6	8 ÷ 8

4 Concealed colors

Almost all creativity involves purposeful play.

This game is also designed to increase your flexibility, your ability to overcome the restrictions of habit. Play it with friends. The one who identifies most of the "hidden colors" wins.

The problem: Name the color concealed (in consecutive letters) in each sentence.

Examples:

1. The newspaper editors decided to go on strike.

   Answer: Red.

2. The cab lacked proper brakes to stop at the intersection.

   Answer: Black.

Now try these:

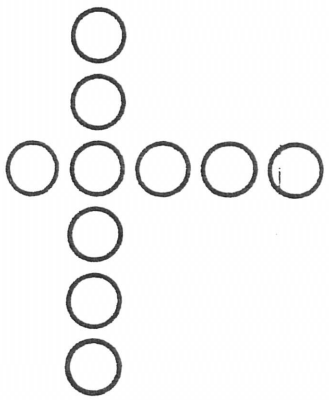
1. A big, old, hungry dog appeared at our door every morning.
2. You shouldn't let an upstart like him bother you.
3. He let out a yell, owing to the injury he received.
4. Long rayon fabrics were exhibited in the window.
5. You shouldn't sell this fossil very cheaply because it is a rare specimen.
6. The new law hit everybody's pocketbook pretty hard.
7. Bob's car let out dark fumes when he tried to drive it up the steep hill.
8. The old ogre entered the argument with obvious relish.
9. A huge dog called Lobo ran gently toward me.
10. After you've let the cat in, dig out the buried treasure.

5 The Greek cross

Creativity is a battle against attitudes.

This puzzle will further train you to avoid restrictions that don't exist but that hamper your mind.

Ten coins are arranged like this:



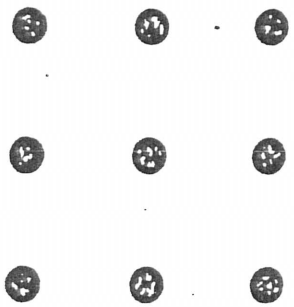
The problem: Move just two coins to other positions so as to form two rows, one horizontal and one vertical, each containing six coins.

Breaking out

You have to free yourself of rules and restraints in order to make discoveries.

This classic puzzle—one already familiar to many—show how easy it is to read into a problem restrictions that don't exist. We often fail to solve a problem because we impose too many imaginary boundaries and constraints.

The problem: Draw four straight lines through these nine dots without retracing and without lifting your pencil from the paper.

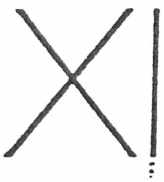


More or less

Only the creative power of the mind can escape the boundaries that confine us.

Here's another problem that can be solved only if you cast off the unwarranted assumptions that restrict your thinking and hamper your imagination. When solving it, try to rid yourself of any prejudgements.

The problem: Add one line to the Roman numeral XI so as to change it to the number ten. Try for at least three different solutions.



It's in the bag

The greatest enemies of creative thinking are crusty rigidity and stubborn complacency.

This exercise shows that to solve a problem you may need to look at it in reverse, to "stand it on its head," so to speak.

The problem: By the 16th hole, one player appeared to be winning the big golf tournament. His iron shot had landed on the green, and he had a good chance of making a birdie. Smiling broadly, he sauntered onto the green, then stopped short, a look of utter dismay coming over his face.

His ball had rolled into a small paper bag carelessly tossed by one of the spectators. It would cost him a stroke if he removed the ball from the bag. If he tried to putt both the ball and bag, he would probably lose control of the shot.

He pondered for a moment, then solved his problem. How did he do it?

The tardy employee

The more ideas you produce, the greater your chance of coming up with really good ones.

This "real life" exercise will strengthen your inventive powers. Keep your imagination moving so as to produce at least five solutions.

The problem: You are the head of a department and have a subordinate who habitually arrives late in the morning but who is too valuable to fire. What can you do to make him arrive on time?

Bright but shy

Only creativity can bring us new awareness.

Psychological experiments have shown that less-creative people, when confronted with a paradoxical or problematic situation, tend to be content with only one or two explanations of it. On the other hand, those who are more creative spend more time analyzing a situation, scanning a broad range of alternatives. They are more likely to think of many possible explanations, and only afterward narrow their list to the more plausible ones.

The problem: Here is a statement that may, or may not, be true, but that you are to assume is true. Give as many reasonable explanations as you can to explain the "truth" of this statement:

It has been found that brighter individuals suffer more from feelings of inadequacy and inferiority than do less bright ones.

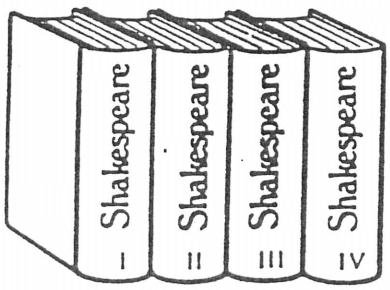
The collected works

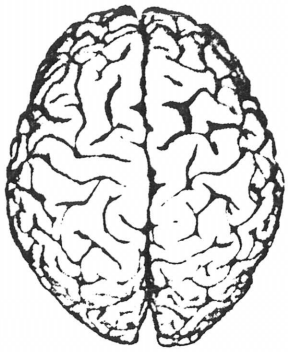
Recognizing the whole problem is half the battle.

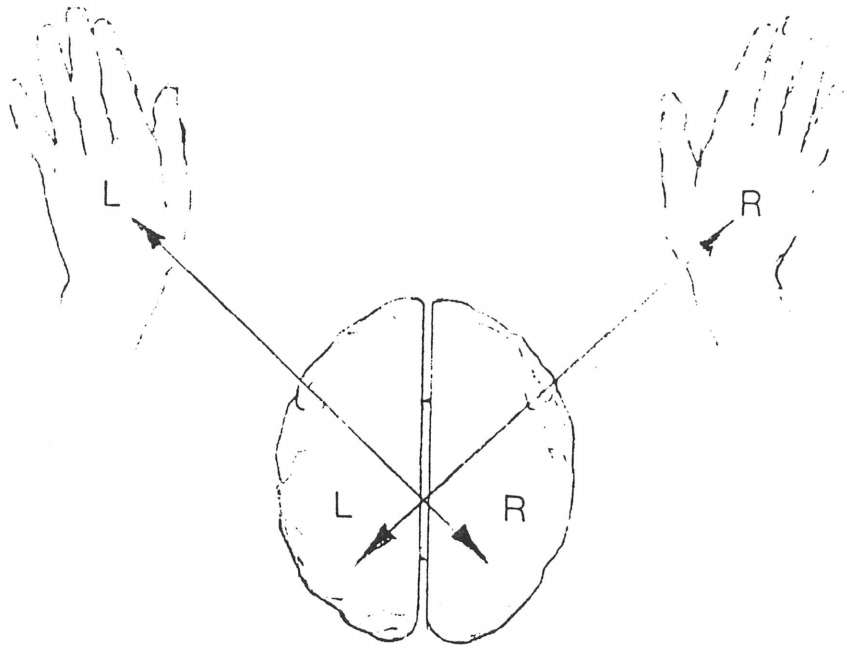
Habitual ways of looking at things hamper creative problem-solving, as has already been shown. The more familiar the situation or object, the harder it is to see it differently. Creativity, however, requires a "fresh pair of eyes."

Although this exercise looks simple, it is actually quite difficult. In fact, only one person in a hundred solves it the first time around. It is included because it is so instructive.

The problem: Four volumes of Shakespeare's collected works stand on a shelf. The total pages of each volume are exactly two inches thick, and the front and back covers are each one eighth of an inch thick. A bookworm starts eating at page one of Volume I and eats his way through to the last page of Volume IV. Through what distance did the bookworm eat?







A Comparison of Left-Mode and Right-Mode Characteristics

L — MODE	R — MODE
Verbal: Using words to name, describe, define.	Nonverbal: Awareness of things, but minimal connection with words.
Analytic: Figuring things out step-by-step and part-by-part.	Synthetic: Putting things together to form wholes.
Symbolic: Using a symbol to *stand for* something. For example, the drawn form stands for *eye*, the sign + stands for the process of addition.	Concrete: Relating to things as they are, at the present moment.
Abstract: Taking out a small bit of information and using it to represent the whole thing.	Analogic: Seeing likenesses between things; understanding metaphoric relationships.
Temporal: Keeping track of time, sequencing one thing after another: Doing first things first, second things second, etc.	Nontemporal: Without a sense of time.
Rational: Drawing conclusions based on *reason* and *facts*.	Nonrational: Not requiring a basis of reason or facts; willingness to suspend judgment.
Digital: Using numbers as in counting.	Spatial: Seeing where things are in relation to other things, and how parts go together to form a whole.
Logical: Drawing conclusions based on logic: one thing following another in logical order — for example, a mathematical theorem or a well-stated argument.	Intuitive: Making leaps of insight, often based on incomplete patterns, hunches, feelings, or visual images.
Linear: Thinking in terms of linked ideas, one thought directly following another, often leading to a convergent conclusion.	Holistic: Seeing whole things all at once; perceiving the overall patterns and structures, often leading to divergent conclusions.