

NAME

COUNTRY

# INSTRUCTIONS (PART 1 - 12)



INTERNATIONAL PUZZLE FEDERATION

**GOOD LUCK!**



Presto Kopyalama

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ÖNSEL

# PART 1 INSTRUCTIONS

## 1. CROSS MATH

Place each digit from 1 through 9 into the empty squares of the grid so that the three rows across and three columns down form correct arithmetic sequences. All calculations (which involve only positive whole numbers) should be performed in order from left to right and top to bottom.

EXAMPLE

The grid consists of 9 empty squares arranged in a 3x3 pattern. An arrow points from this grid to a completed version where digits 1 through 9 are placed to satisfy the arithmetic conditions.

+	÷	= 2
-	X	-
+ - = 4		
X + X X		
÷ + = 8		
= = =		
64	32	16

9 + 5 ÷ 7 = 2		
-	X	-
1 + 6 - 3 = 4		
X + X X		
8 ÷ 2 + 4 = 8		
= = =		
64	32	16

## 2. THE İSTANBUL PUZZLE

Show how all the 12 pieces shown in the middle lie within the rectangle  $4 \times 16$  shown at the top, to make its pattern. Then make the checkerboard  $8 \times 8$  (exactly with its pattern) shown below using the same pieces. The pieces can be rotated—but you are not allowed to overturn or overlap them. Note that the S consists of three pieces.

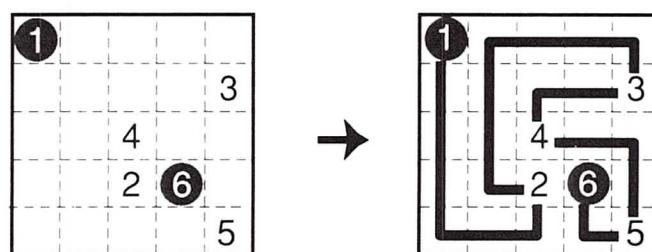
## 3. THE SHADOWY WORLD

Only one person casts a correct shadow. Find which is correct and answer its number.

## 4. FROM 1 TO 10

Beginning in the square with number 1, connect the numbers in increasing order with an unbroken line. The lines don't intersect or overlap.

EXAMPLE



## 5. CUTTING THE TURKEY

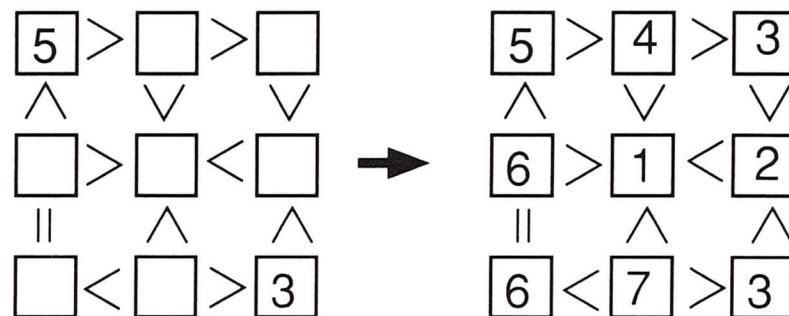
Using the dotted lines as in guides, cut the turkey in two so that the two pieces of the turkey become the same in size and shape.

# PART 1 INSTRUCTIONS

## 6. ALL THINGS NOT BEING EQUAL

Put the numbers from 1 to 7 in the white squares to make a series of correct mathematical expressions.

EXAMPLE



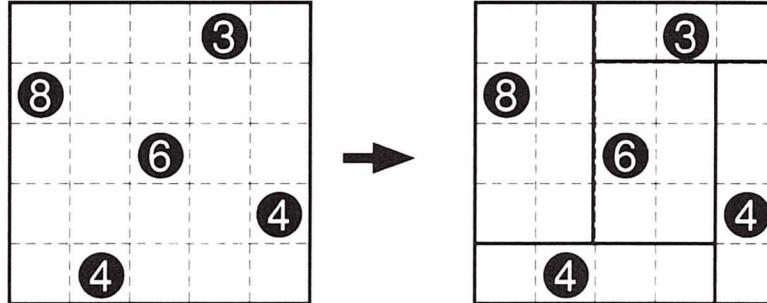
## 7. MULTIPLE SKELETON

The five puzzle squares are prepared. And the only one word list is supplied with them. You can fit all of the words in the list into two of the five puzzle squares. You can't fit them into the other three puzzle squares. Try to find out the two puzzle squares and solve them.

## 8. FAIRLY AND SQUARELY

Using the dotted lines as guides, divide the  $10 \times 10$  grid into rectangles (or squares). Each number represents the size of each rectangle. Every rectangle must have a number in it. The area of a small square is 1.

EXAMPLE



## 9. BALANCING

Two of the five weights have the same weight. Can you find out the two weights?

## 10. SPIDER WEB

Place the numbers from 0 to 9 so that the sum of the three numbers in a line comes to 15.

## 11. BROTHERS AND SISTERS

The five pair of brothers or sisters took the four pictures. It is sure that the two of each pair are in the same pictures. Try to find out the five pair of brothers or sisters. A pair can be men or women, or a man and a woman.

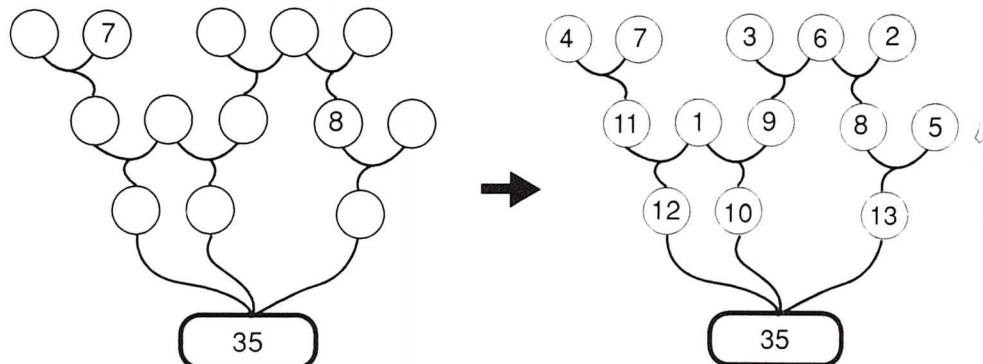
# PART 1 INSTRUCTIONS

## 12. FIGURE TREE

Insert the numbers 1 to 14 (in the example: 1 to 13) in the circles so that each circle's number is equal to the sum of the numbers in the circles into which it branches off. For example, the five limbs that branch off the trunk should have numbers that add up to 35 (in the example: 35). To start you off, a few numbers have been filled in.

### EXAMPLE

(1~13)

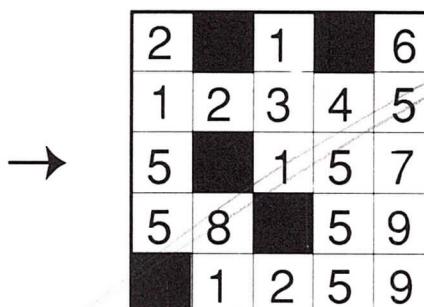
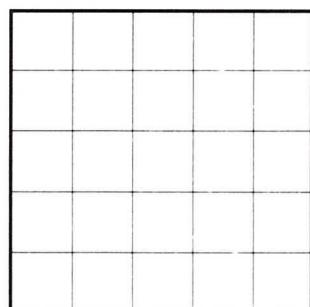


## 13. MAKING A NUMBER SKELETON

Fit the numbers listed into the diagram. You have to put the numbers of the group of ACROSS from left to right and the numbers of the group DOWN from top to bottom. When you place a number, you should paint over squares which is next to the initial digit and the last digit of each number. You can use a bold line instead of painting a square black. Black squares can't touch horizontally or vertically. When completed, the diagram will contain all of the terms listed. These will interlock across and down as in a standard skeleton. The only numbers that go in the puzzle are the ones in the list. Can you fill them in?

### EXAMPLE

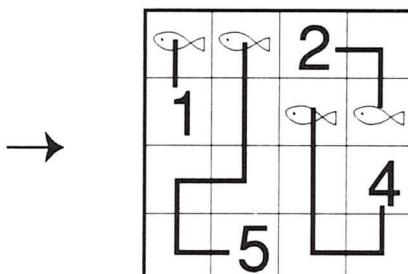
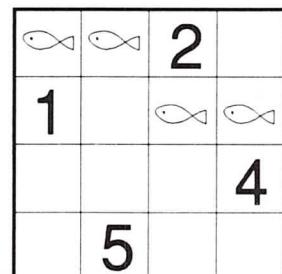
**ACROSS :**      **DOWN :**  
58                  81  
59                  131  
157                2155  
1259               4555  
12345              65799



## 14. OUT FISHING

Connect each number with a fish. Each number means the number of squares you must pass through to get a fish. A square with a fish is counted. The lines don't intersect or overlap.

### EXAMPLE



## PART 1 INSTRUCTIONS

### 15. WORD SANDWICHES

There are 14 words (in the example: 5 words) hidden in the diagram below, running horizontally, vertically, or diagonally, but always in a straight line. And it is important that you must paint over two squares which is next to the initial letter and the last letter of each word. You can use a bold line instead of painting a square black.

EXAMPLE

ONE	E	E	R	H	T	O
TWO	T	F	O	U	R	F
THREE	O	H	I	T	W	O
FOUR	W	E	R	V	N	U
FIVE	T	H	R	E	E	R
	O	N	E	V	I	F

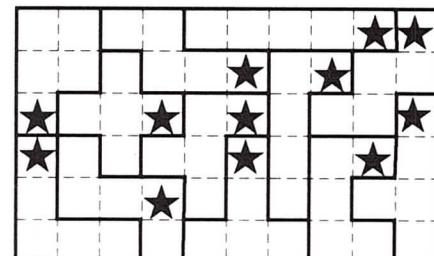
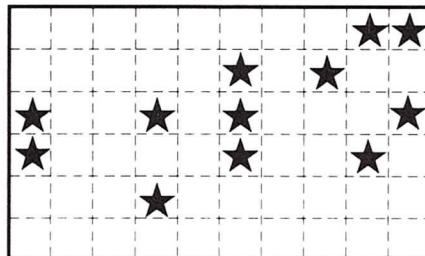


E	R	H	T	O
<del>E</del>	<del>R</del>	<del>H</del>	<del>T</del>	<del>O</del>
<del>O</del>	<del>H</del>	<del>I</del>	<del>T</del>	<del>W</del>
<del>W</del>	<del>E</del>	<del>R</del>	<del>V</del>	<del>N</del>
<del>T</del>	<del>H</del>	<del>R</del>	<del>E</del>	<del>E</del>
<del>O</del>	<del>N</del>	<del>E</del>	<del>V</del>	<del>I</del>

### 16. PENTOMINOES

Divide the diagram into the twelve pieces of pentominoes in such a way all of the pentominoes have a star in them. You can turn the pieces and mirror them.

EXAMPLE



### 17. LATIN SQUARE

Place the figures 1 to 7 ( in the example : 1 to 5 ) in each of the rows and columns, as well as in the two diagonals.

EXAMPLE

(1~5)

2		5		
3		4		



4	3	5	1	2
1	2	3	5	4
2	5	1	4	3
5	4	2	3	1
3	1	4	2	5

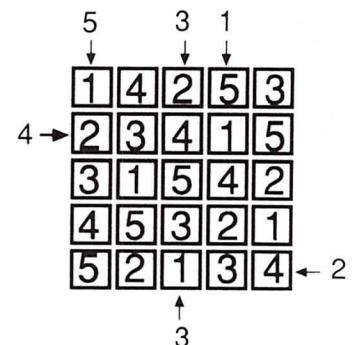
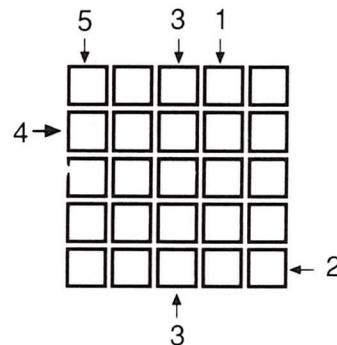
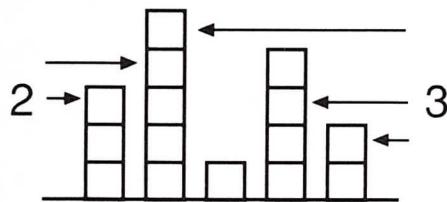
# PART 1 INSTRUCTIONS

## 18. SKYSCRAPERS

This is a bird's eye view of a town quarter. Each square represents a building. The quarter has forty nine buildings (in the example : twenty five buildings) in it. The numbers outside the diagram show how many buildings can be seen from one end of a particular row or column. Indicate the height of each building. No row or column can contain two buildings of the same height.

### EXAMPLE

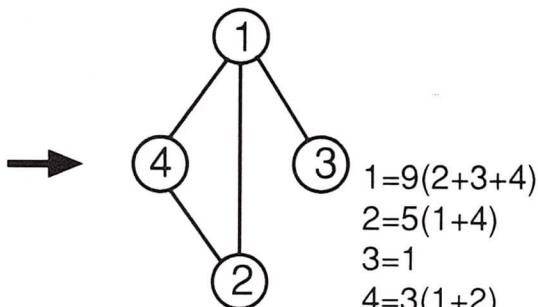
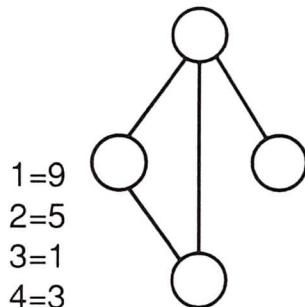
(1~5)



## 19. FIGURE NETWORK

Insert the numbers 0 to 13 (in the example : 1 to 4) in the circles according to the following condition. The left side of an equal sign indicates a number in a circle and the right side of an equal sign indicates the sum of the numbers in the circles which is connected with each number.

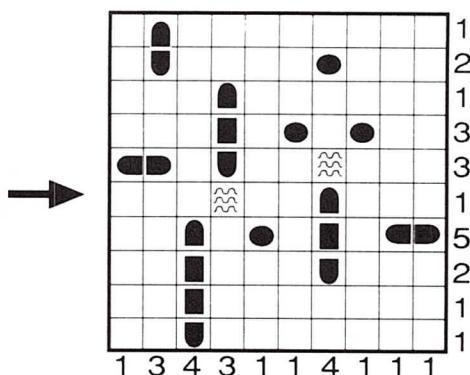
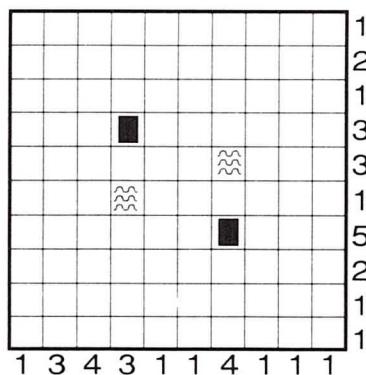
### EXAMPLE



## 20. BATTLESHIPS

Place the entire fleet in the diagram. Ships can be lying horizontally or vertically, and must not touch, not even diagonally. The numbers at the side and along the bottom of the diagram tell you how many parts of vessels can be found in that row or column. Note : The number of vessels is different from standard battleships puzzles.

### EXAMPLE



Battleship   
Cruisers   
Destroyers   
Submarines

## **PART 2 INSTRUCTION**

### **PUT TOGETHER**

Put the nine parts together and make an equilateral hexagon.

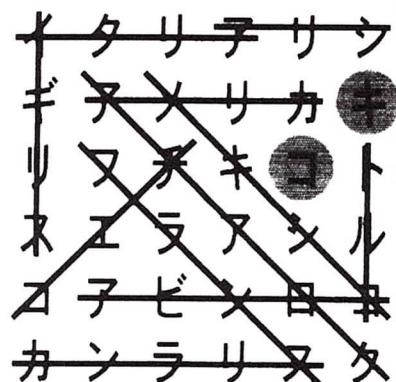
## PART 3 INSTRUCTION

### WORD SEARCH

The names of countries are hidden in the puzzle. After you finish finding out all of the names, answer how many letters which are not used are left in the puzzle. Here is a little example with Japanese words. But don't worry. We don't use Japanese in the problem for the Championship.

#### EXAMPLE

イタリアリシ  
ギアメリカキ  
リフチキコト  
スエラアシリ  
コアビンロコ  
カンラリスク



#### LIST

- |         |         |
|---------|---------|
| 1 アメリカ  | 7 スリランカ |
| 2 イギリス  | 8 チエコ   |
| 3 イタリア  | 9 トルコ   |
| 4 クロアチア | 10 フランス |
| 5 コロンビア | 11 メキシコ |
| 6 シリア   |         |

- |            |             |
|------------|-------------|
| 1 U.S.A.   | 7 Sri Lanka |
| 2 U.K.     | 8 Czech     |
| 3 Italy    | 9 Turkey    |
| 4 Croatia  | 10 France   |
| 5 Colombia | 11 Mexico   |
| 6 Syria    |             |

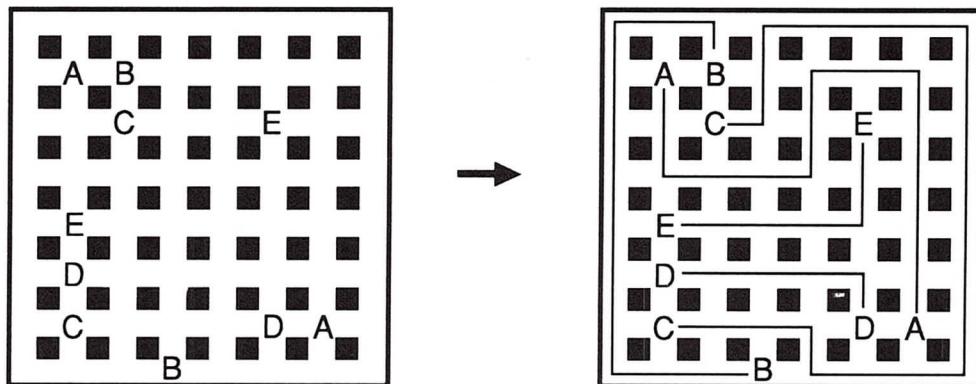
Ans. 2

## PART 4 INSTRUCTIONS

### 1. ABC CONNECTION 10

Connect the same symbols with an unbroken line. The lines don't intersect or overlap.

EXAMPLE



### 2. TANGRAM PUZZLES

The tangram set consists of the seven pieces as shown in the diagram. Arrange the seven pieces to form each shape from 1 to 30. All the pieces must be used and no piece may overlap another.

Try to make all the shapes and draw the lines so that each piece of the tangram can be found.

## PART 5 INSTRUCTIONS

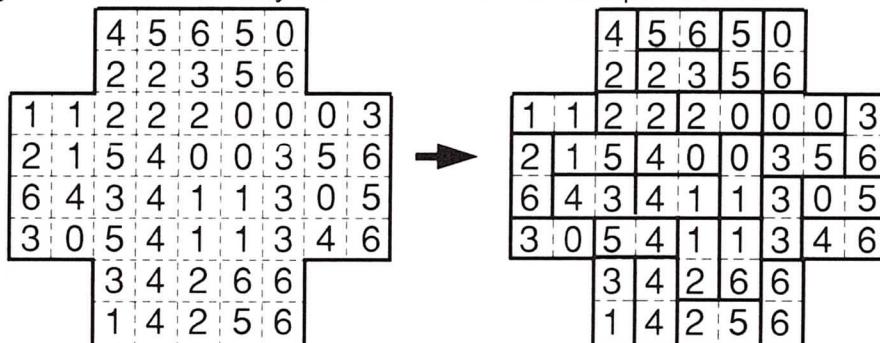
### 1. 10 ERRORS

Each block of the lower picture is a segment of the upper picture. But there are differences in ten of those blocks. Find out differences and mark the ten blocks.

### 2. DOMINO HUNT

We have placed a complete set of 28 dominoes in the diagram. However, the sides of the dominoes have been removed and the spots have been replaced by numbers. Can you draw the sides in the diagram to show exactly how the dominoes are positioned?

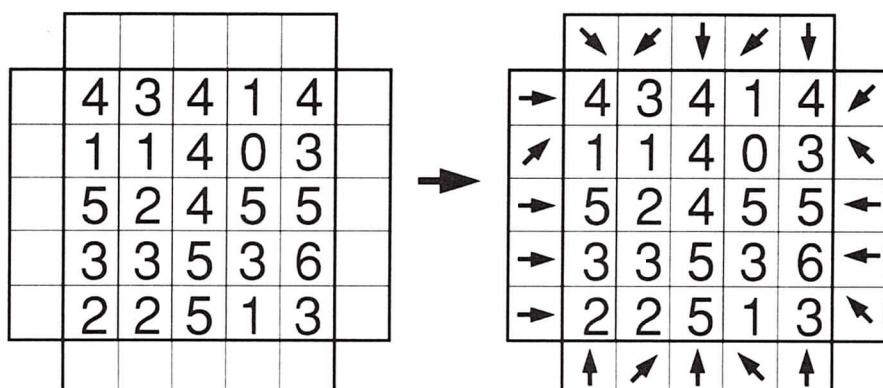
EXAMPLE



### 3. ARROWS

Insert arrows in the blocks outside the square. Arrows must point one of the eight directions and each number must correspond to the number of arrows facing it.

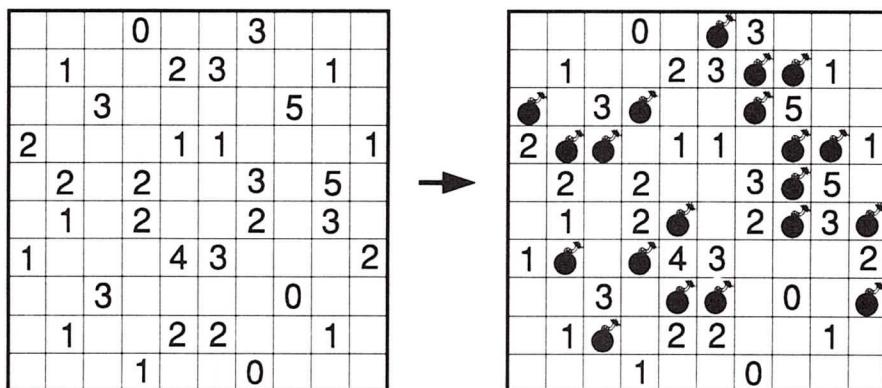
EXAMPLE



### 4. MINESWEEPER

There are 20 mines hidden in the diagram. The figures in the diagram indicate the number of mines that can be found on the squares immediately adjacent to that square-----horizontally, vertically or diagonally. There is a maximum of one mine per square. Squares with a figure do not contain mines. Notes: only solutions with 20 mines will be accepted.

EXAMPLE



## PART 5 INSTRUCTIONS

### 5. CHANGEABLE SNAIL

At first the snail had the figure of the picture 1. It changed gradually and at last it was transformed into the figure of the picture 12. Will you put the pictures in the right order?

### 6. DIGITAL PROBLEMS

Add three parts to the digits in each row so that the addition is formed correct.

#### EXAMPLE

0 1 2 3 4 5 6 7 8 9

THE MODEL FOR THE DIGITS

This model is the Japanese style.

The shape of 7 is different from the European style.

$$\begin{array}{r} 888 \\ 888 \\ + 888 \\ \hline 888 \end{array}$$

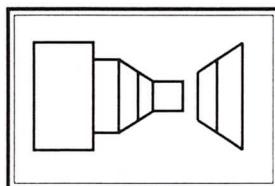
$$\begin{array}{r} 888 \\ 888 \\ + 888 \\ \hline 888 \end{array}$$

THE THREE PARTS WHICH WERE ADDED

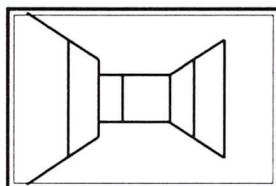
### 7. 3D DUNGEON

We entered the dungeon at the square with S(=Start) and went through it. We took the three pictures ( in the example : two pictures ) on our way to the square with G(=Goal), facing toward the way we're going. We took them in numerical order. Try to find the route we took from S to G. Make sure that you must not pass any square in your route more than once.

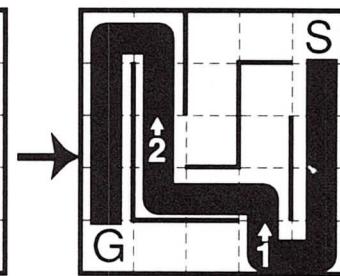
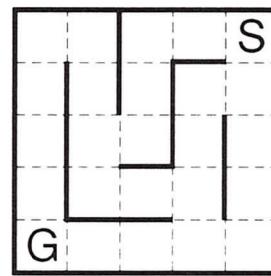
#### EXAMPLE



Picture 1



Picture 2



### 8. NUMBER SKELETON

Fit the numbers into their proper places in the puzzle square. You should place the numbers in order from left to right and top to bottom.

### 9. LOOP DE LOOP

There are numbers from 1 to 8 in the diagram. And there are two of each digit. Choose one of each and connect it to other digits to create a single unbroken loop. The numbers need not to be in numerical order.

#### EXAMPLE

1	4	8	5
8	2	5	6
6	3	7	3
2	7	4	1

1	-	4	-	8	5
8	-	2	-	5	6
6	-	3	-	7	3
2	-	7	-	4	1

×

1	-	4	-	8	5
8	-	2	-	5	6
6	-	3	-	7	3

×

1	-	4	-	8	5
8	-	2	-	5	6
6	-	3	-	7	3

×

1	-	4	-	8	5
8	-	2	-	5	6
6	-	3	-	7	3

○

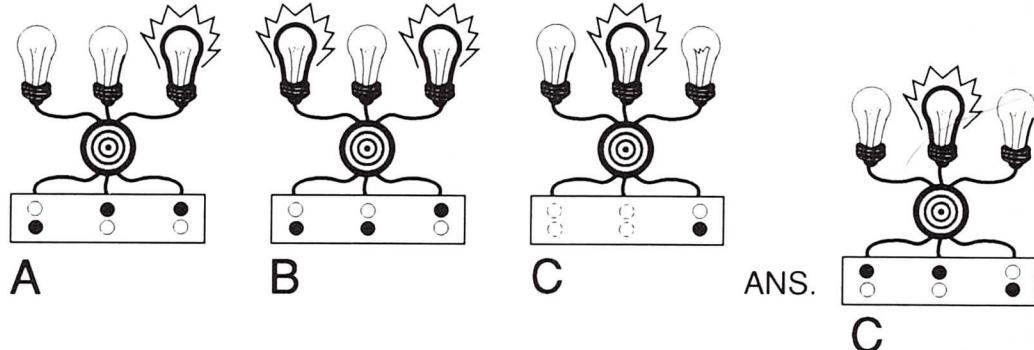
## PART 5 INSTRUCTIONS

### 10. ON-OFF LOGIC

There are four groups of lights below. The four groups A, B, C and D have the same system. When you press either of the two buttons lined vertically, one of the lights will be on or off. It is sure that one button is to switch on and the other button is to switch off. But we don't know which is which. The black buttons are now pressed. Then which buttons will you press to make the situation of D?

#### EXAMPLE

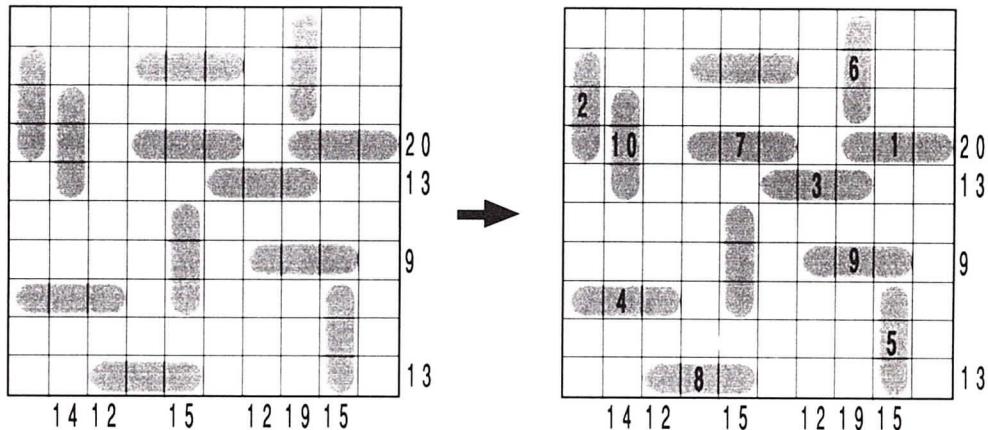
The three groups of lights have the same system as mentioned above. Which buttons will you press to make the situation of C?



### 11. PILLBOX

The figures 1 to 10 should be placed in ten of the twelve colored shapes in the diagram. Each figure occurs only once. Two shapes contain no figure. The figures outside the diagram indicate the sum of the figures in the relevant row or column. Can you number the pillboxes?

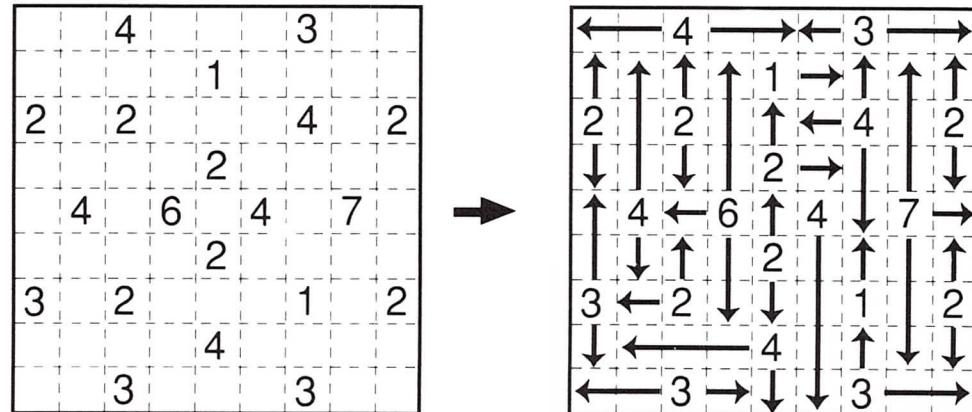
#### EXAMPLE



### 12. ALONG THE LINES

From each numbered square must be drawn one or several straight lines in horizontal and/or vertical, which altogether pass through as many squares as indicated by the corresponding number. The numbered square itself is not counted. It is at the same time important that the lines don't intersect or overlap and that finally no initially empty square remains unpassed.

#### EXAMPLE



## PART 5 INSTRUCTIONS

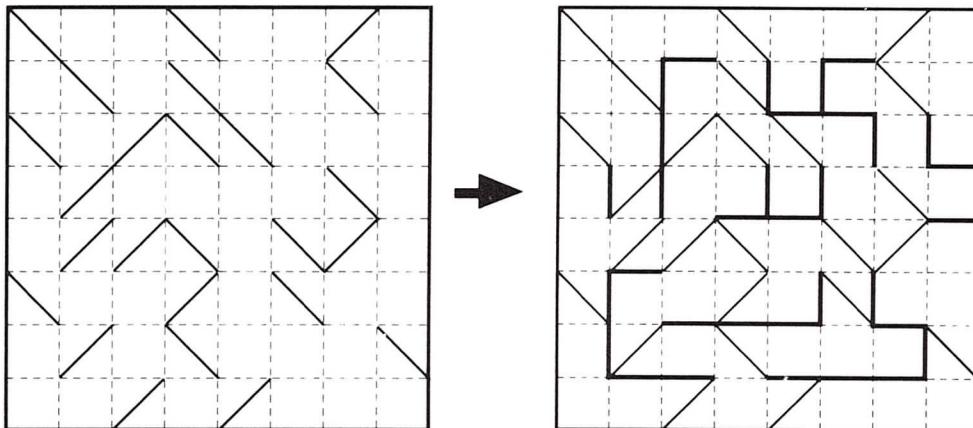
### 13. LOGIC CROSSWORD

Place the words listed in the diagram so that these words interlock across and down as in a standard crossword. You will fill in the diagram with not only letters but black squares. Black squares don't touch each other horizontally or vertically. The words "CD" and "NEANDERTHAL", the words "MEN" and "ERROR" will cross each other.

### 14. DIVIDE 4

Using the dotted lines as guides, divide the 8 x 8 grid into segments whose area each add up to four. The area of a small square is 1. The shapes can vary.

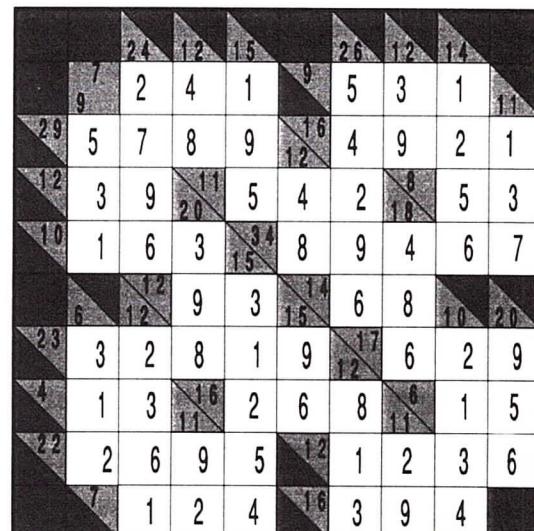
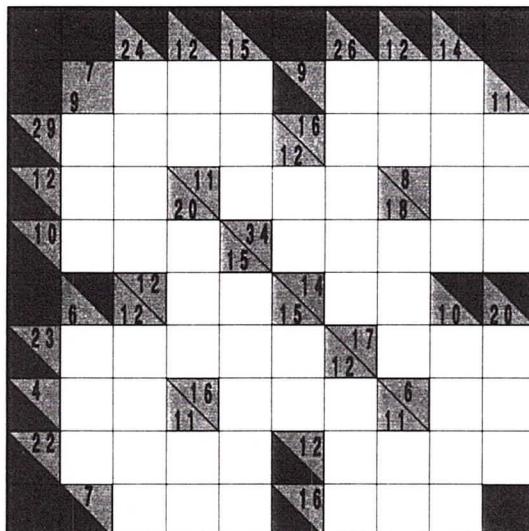
EXAMPLE



### 15. CROSS SUMS

Enter digits in the grid---one per square---so that the digits in each series of white squares add up to the number in the accompanying grey-colored cell. A number above a diagonal refers to the digits to be filled in to the right of that cell. A number under a diagonal refers to the digits to be filled in under that cell. The digit 0 is not used, and no digit is ever repeated in a group.

EXAMPLE



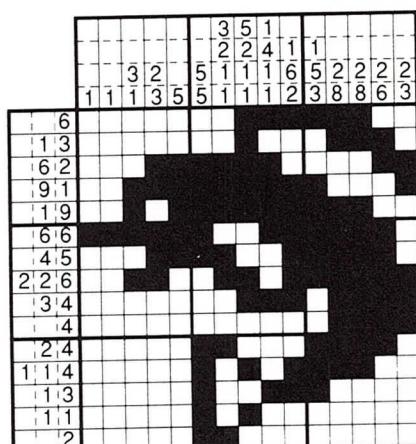
## PART 6 INSTRUCTIONS

### 1. PAINT BY NUMBERS

The numbers on the left of each row and the top of each column tell you how many groups black squares there are in that line and, in order, how many consecutive black squares the are in each group.

#### EXAMPLE

			3 5 1				
		2 2 4 1 1					
	3 2 5 1 1 6 5 2 2 2 2 2						
1 1 1 3 5 5 1 1 1 2 3 8 8 6 3							
6							
1 3							
6 2							
9 1							
1 9							
6 6							
4 5							
2 2 6							
3 4							
1 4							
2 4							
1 1 4							
1 3							
1 1							
2							



### 2. WHAT'S NEXT?

Each problem has its own rule. Try to find out the rule and answer what's next.

### 3. TWO SNAKES

11 yellow and 8 blue, a total of 19 pieces (overturning not allowed).

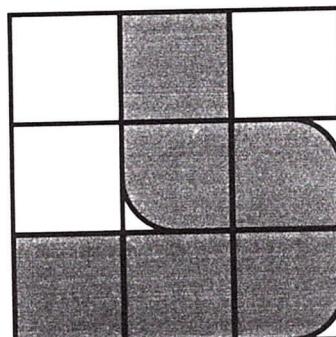
Place all the pieces into the 8x8 board, so that two color—yellow and blue—continuous (coherent) snakes appear.

Each snake must include all of the pieces of a respective colour.

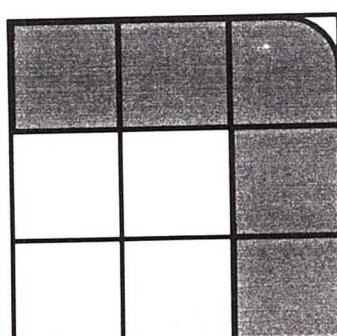
Both snakes must have at their ends (head and tail) fully rounded pieces:



Each snake must be narrow (one square thick); a 2x2 placement of the same colour is not allowed:



And, all outside right angles of the snakes must be rounded like this:



## PART 7 INSTRUCTIONS

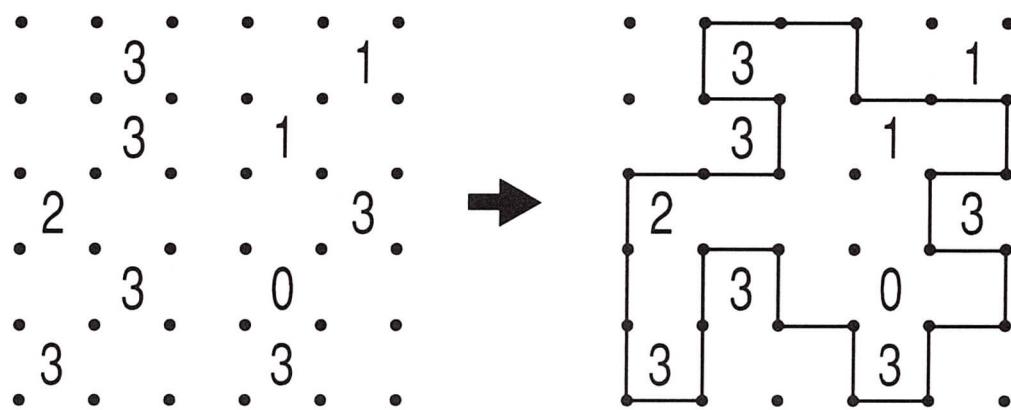
### 1. JUST FAKING

The pieces from 1 to 15 are parts of the picture. But all of them don't fit the picture. Two of them are fake. Try to find out and answer the numbers of the two pieces.

### 2. ON THE DOT

Connect dots and create a single unbroken loop. A number in a square formed by the four dots means how many sides you should draw. For example, a square with 3 has three sides. It is not clear how many sides a square with no number has. The lines don't intersect or overlap.

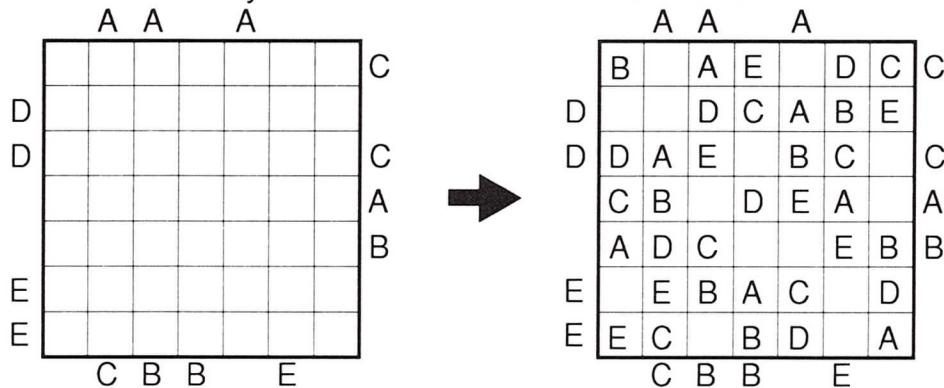
EXAMPLE



### 3. EASY AS ABC (DE)

Fill in the letters A, B, C, D and E in the diagram. Each letter occurs once in each of the rows and columns. Twenty four ( in the example : fourteen ) cells will remain empty. The letters outside the diagram are the letters you come across first from that direction.

EXAMPLE



### 4. MOON, STAR & SUN LOOP

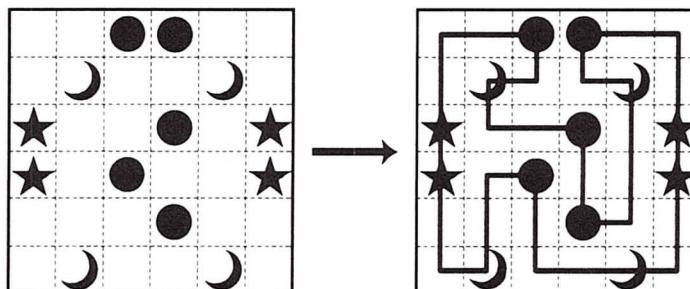
In this diagram provided with three kinds of markings --- moon, star and sun --- you have to draw a continuous and closed path, running through all squares.

The conditions are :

--- at the transition between two markings of different kinds there is obligatory to draw a change of direction ( 90 degrees ).

--- between two markings of the same kind, the connecting line must be straight.

EXAMPLE



## PART 7 INSTRUCTIONS

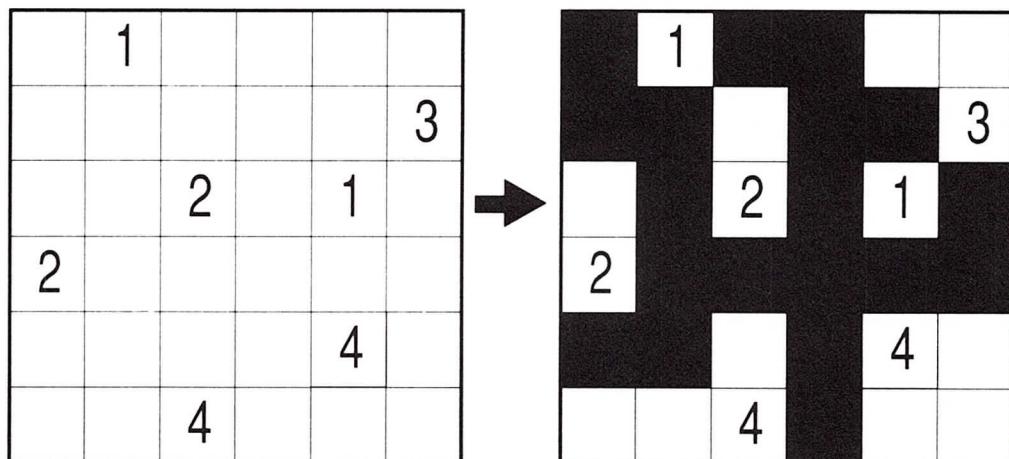
### 5. LAY BRICKS

Place black squares in the diagram according to the following conditions.

The conditions are:

- Black squares are not placed in the squares with a number.
- You must leave as many white squares as each number, including a square with a number.
- Each series of white squares should have a number in it. The shape of a white space can vary.
- Black squares should divide a series of white squares from each other.
- Black squares must be connected somewhere.
- Don't make 2 x 2 black squares.

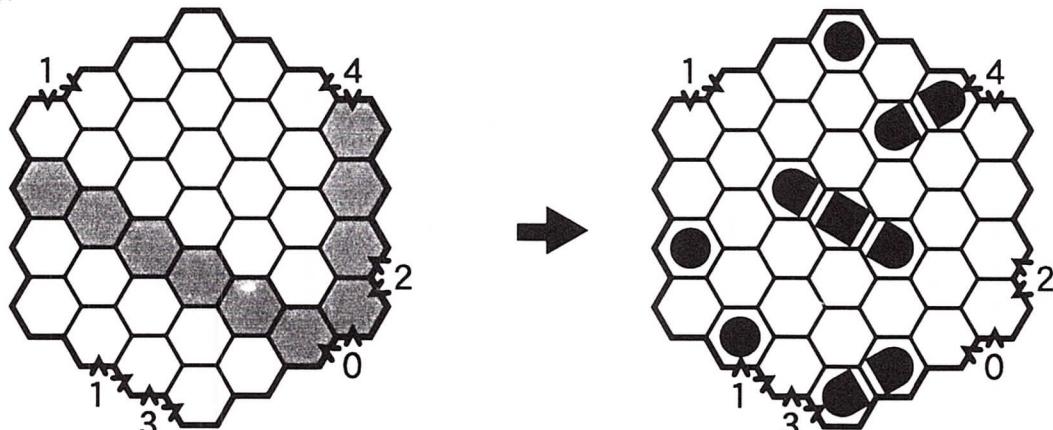
#### EXAMPLE



### 6. BATTLESHIPS IN THE HEXAGONAL FIELD

This puzzle is solved almost the same way as a regular BATTLESHIPS. But the numbers around the diagram tell you how many parts of vessels can be found in the two directions each arrow indicates.

#### EXAMPLE



Cruisers

Destroyers

Submarines

## PART 7 INSTRUCTIONS

### 7. IN FOUR DIRECTIONS

Place the 28 artist names in the grid. The words start in the squares with the appropriate numbers and go along straight lines. The direction, however, is for the solver to find out. It may be horizontal (forwards or backwards) or vertical (up or down). No black squares are used. After the puzzle has been solved, no empty square will remain. Letters of each word will be crossed by other words.

#### EXAMPLE

#### LIST

- 1 KLIMT
- 2 HOKUSAI
- 3 DALI
- 4 MILLET
- 5 TURNER
- 6 GADDI
- 7 KLEIN
- 8 WORTHEN
- 9 CHAGALL
- 10 ESCHER

			1		2
	3			4	
					5
6			7		
8			9		
				10	



A	S	U	K	O	H
I	D	A	L	I	M
A	D	G	L	E	T
G	N	A	K	I	U
W	E	H	C	N	R
O	R	T	S	E	R

### 8. THE CONTOUR COUNT

Place in the diagram all nine digits shown below it—one digit per square—so that, when you stack three digits from each row, column, or main diagonal, you may obtain the pattern shown at the corresponding row, columns, or diagonal respectively. You are not allowed to rotate and overturn the digits.

### 9. PENTAGON II

Place the twelve pieces of pentominoes (in the example: five pieces) in the diagram in such a way that they don't touch each other anywhere, not even diagonally. The numbers at the right side and along the bottom of the diagram tell you how many pentominoes can be found in that row or column. The numbers at the left side and on the top of the diagram indicate how many parts of the pieces each row or column contains. The pieces may be turned or mirrored. A few parts of pentominoes have been placed on the black squares.

#### EXAMPLE

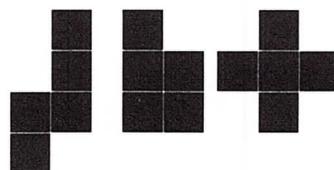
4	3	3	4	2	4	5
5						
4						
2						
3						
3						
3						
3						
5						

(2) (2) (3) (2) (2) (2) (2)



4	3	3	4	2	4	5
5						
4						
2						
3						
3						
3						
3						
5						

(2) (2) (3) (2) (2) (2) (2)



## PART 7 INSTRUCTIONS

### 10. SQUARE MASTERMIND

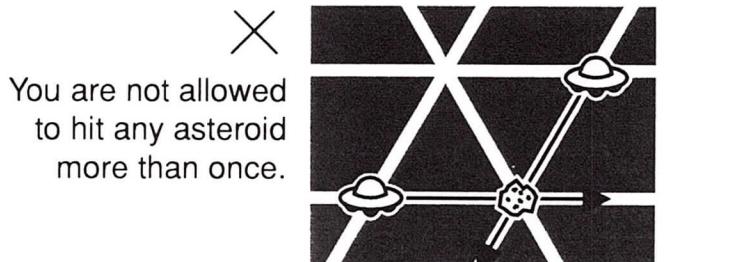
Three grids contain random arrangements of 16 letters from A to P ( in the example : 9 letters from A to I ). Fill in the empty grid using information provided by stars. White stars indicate correct letters in incorrect locations. Black stars indicate correct letters in correct locations.

#### EXAMPLE

A	B	C	★☆☆	A	E	C	★☆☆	B	A	C
H	D	I	★★	G	I	H	★★	H	E	I
G	E	F	☆☆	B	D	F	★☆	F	D	G
★	☆	★		☆	★	★				
☆	★			☆						

### 11. ASTEROID BELT

The object of this puzzle is to destroy all the asteroids using the four flying saucers. Now there are three flying saucers in the picture. You should put the last one in the right place of the picture. Each saucer must shoot exactly twice. A shot continues in a straight line, along a white path, until it leaves the picture --- destroying all asteroids that it passes through. You are not allowed to hit any asteroid more than once. Show the directions in which the shots should go.



### 12. ARROW MAZE

Starting in the grid with number 1, you will go in the direction an arrow shows and stop by one of the grids of that direction. You must stop by all grids according to the arrows. Try to find an answer and put the numbers from 1 to 36 ( in the example : from 1 to 16 ) in the grid in order you stop by. A few numbers have been filled in.

#### EXAMPLE

(1~16)

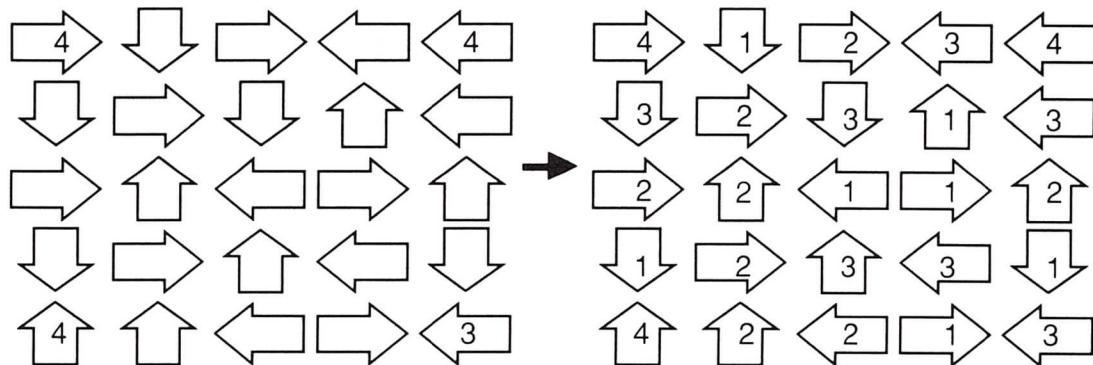
1 →	↓	↓	↓	→	1 →	6 ↓	2 ↓	12 ↓	
→	←	10 →	↑	→	9 →	8 ←	10 →	11 ↑	
↓	7 ↑	↓	←	→	14 ↓	7 ↑	3 ↓	13 ←	
→	↑	←	16		15 →	5 ↑	4 ←	16	

## PART 7 INSTRUCTIONS

### 13. NUMBER POINTERS

Insert a number in each arrow to represent the number of different digits in the indicated direction.

#### EXAMPLE



## **PART 8 INSTRUCTION**

### **NINE PIECE PUZZLE**

Using the nine pieces, make a 3X3 square which has three of each symbol (a star, a diamond, a circle and a triangle ) in it. We will give you a hint in fifteen minutes.

## PART 9 INSTRUCTION

### NUMBER PLACE

Fill in the square with the figures from 1 to 9 in such a way the figures in all rows and all columns and all smaller squares ( $3 \times 3$ ) differ from each other. Diagonally the repeating of the figures is allowed.

EXAMPLE

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



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

## PART 10 INSTRUCTIONS

### 1. CONCENTRATION

Find the two pairs of pictures which contain the same things.

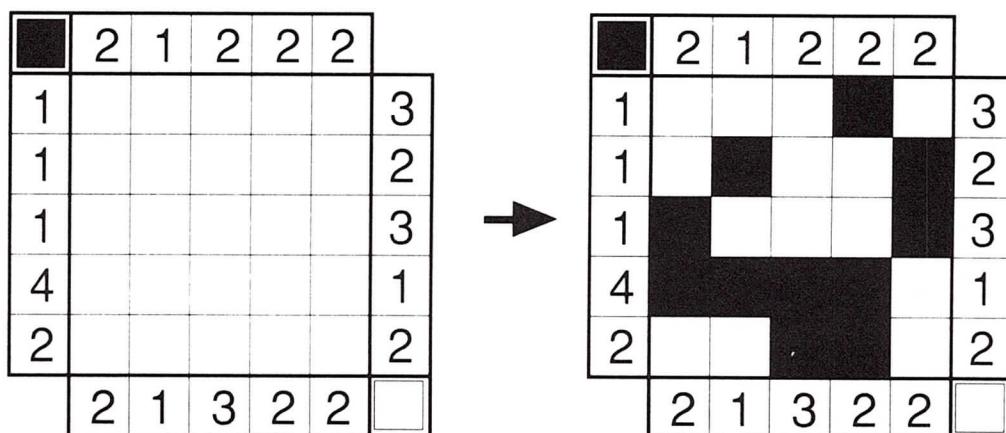
### 2. WORDS ACROSS AFRICA

The list below contains the names of countries in Africa. Fill them in on the diagram. To start you off, some letters have been filled in. Every name crosses with one or more other names.

### 3. LOCATIONS

Each "coordinate" noted into the diagram border indicates the longest succession of consecutive black (upper and left border) or white squares (lower and right border) in the horizontal or vertical line in question.

#### EXAMPLE



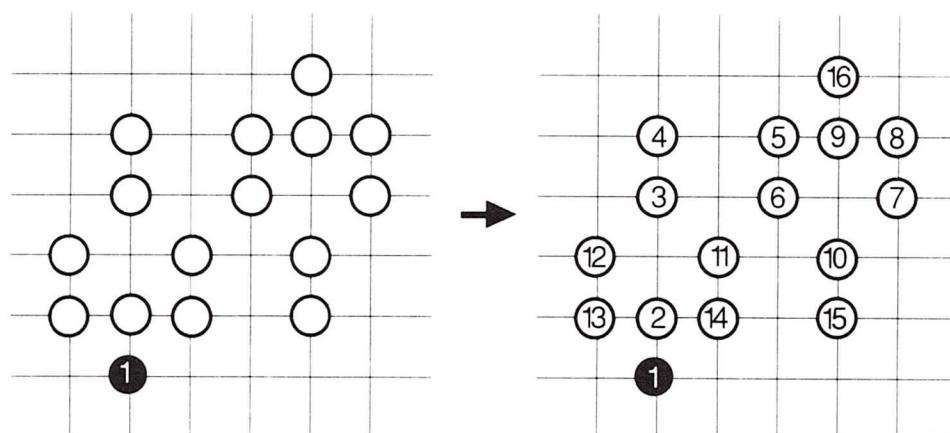
### 4. HIROIMONO

"HIROIMONO", which means picking up something, is one of the Japanese traditional puzzles. Beginning in the black stone numbered 1, you have to pick up all of the white stones and number them in the order in which you pick up according to the following conditions.

The conditions are:

- You should go along lines horizontally or vertically.
- You can change directions when you pick up a white stone. But you must not return.
- You must pick up the white stones which you come across. If you pass the place where you have picked up a white stone once, you can't change directions anymore because there is no stone there.

#### EXAMPLE

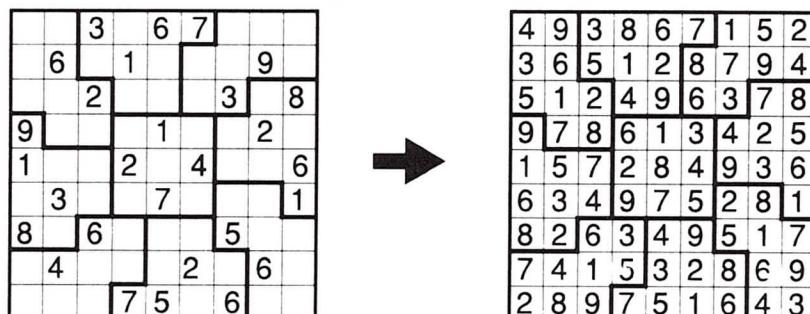


## PART 10 INSTRUCTIONS

### 5. THE MAGIC SQUARE

Fill in the diagram with the figures 1 to 9 so that the figures in all rows and all columns as well as in each specially marked form differ from each other. Diagonally the repeating of the figures is allowed.

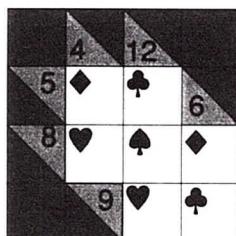
EXAMPLE



### 6. CARDS CROSS SUMS

This puzzle is constructed with cards. It is solved almost the same way as a regular CROSS SUMS. Enter digits in the grid---one per square---so that the digits in each series of white squares add up to the number in the accompanying grey-colored cell. A number above a diagonal refers to the digits to be filled in to the right of that cell. A number below a diagonal refers to the digits to be filled in under that cell. The digit 0 is not used, and no digit is ever repeated in a group. And it is at the same time important that each card from 1 to 9 with each suit---hearts, diamonds, clubs, spades---is used only once.

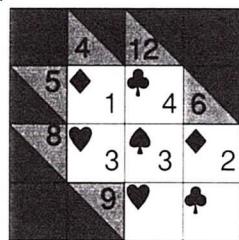
EXAMPLE



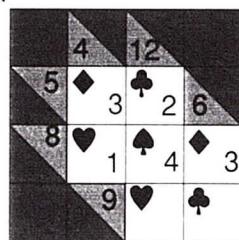
×

×

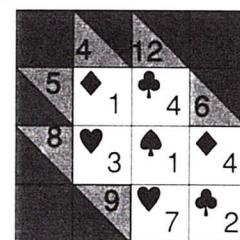
○



The number 3 is  
repeated in a group.



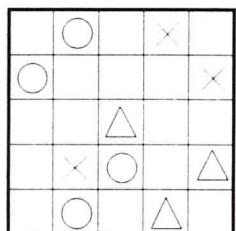
The three of hearts  
is used twice.



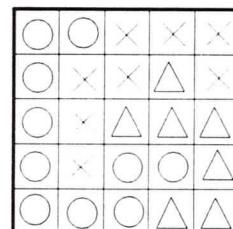
### 7. ○△×

Fill in the diagram with the symbols, ○, △ or × so that the same symbols are adjacent horizontally or vertically and a group of the same symbol is not divided. But you don't form the same symbols into 2 x 2 squares. The empty squares must not be left.

EXAMPLE



→



## PART 10 INSTRUCTIONS

### 8. EQUAL

Place each arithmetic symbol  $=$ ,  $+$ ,  $-$ ,  $\times$  or  $\div$  into the empty squares so that each mathematical expression is formed correct. All calculations should be performed in the order in which the multiplying and dividing are preceded.

EXAMPLE

$$\begin{array}{ccccccccc} 1 & \square & 3 & \square & 4 & \square & 6 & \square & 8 & \square & 9 \\ & & & & & \downarrow & & & & & \\ 1 & = & 3 & \times & 4 & \div & 6 & + & 8 & - & 9 \end{array}$$

### 9. ALL ALONE

Black out some of the numbers in the diagram so that no row or column contain two of the same digit. Black squares must not touch horizontally or vertically. And it is not allowed to split the diagram with black squares.

EXAMPLE

3	1	1	1	2
1	2	3	4	5
2	3	5	5	1
4	4	2	3	5
4	4	5	2	3

3		1		2
1	2	3	4	5
2	3		5	1
4		2	3	
	4	5	2	3

### 10. 24-STAR PUZZLE

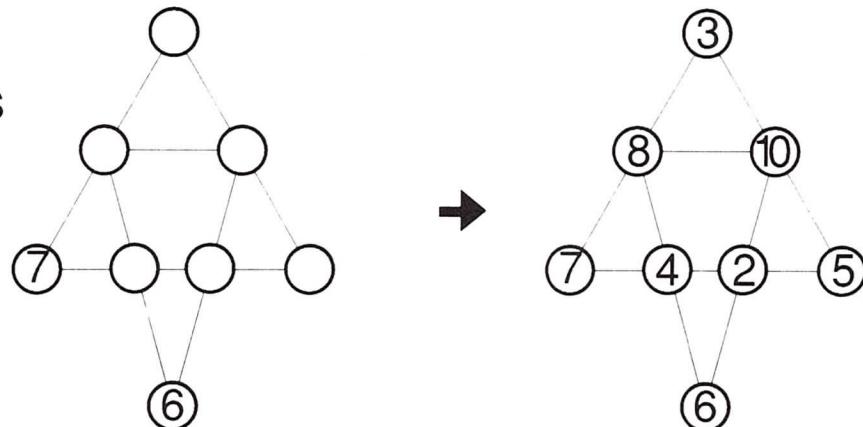
Place 10 numbers from 1 to 12 in the small circles so that the sum of the four numbers in a line and the sum of the five numbers in a circle comes to 24.

EXAMPLE

1~10

USE 8 DIGITS

TOTAL 18

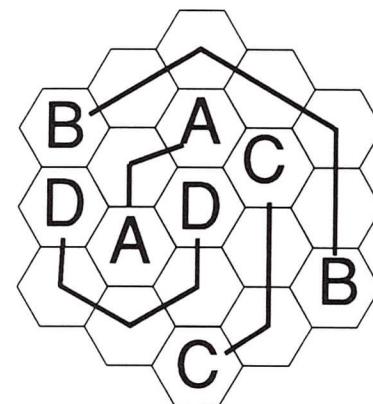
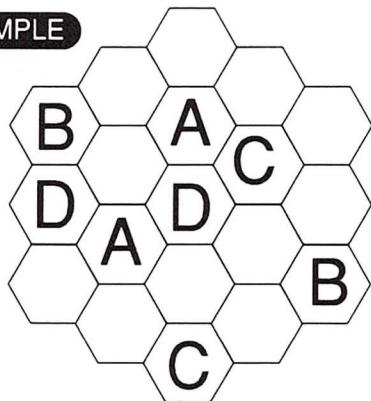


## PART 10 INSTRUCTIONS

### 11. HONEYCOMB ABC CONNECTION

Connect the same symbols with an unbroken line. The lines don't intersect or overlap.

EXAMPLE



### 12. NUMBERS LOOKING A PICTURE

The numbers from 1 to 9 ( in the example : five numbers ) in the diagram have been replaced by pictures. The numbers at the side and along the bottom of the diagram tell you the sum of the figures in the relevant row or column. Determine the number value of each picture.

EXAMPLE

				=29
				=23
				=12
				=22
22	19	17	28	



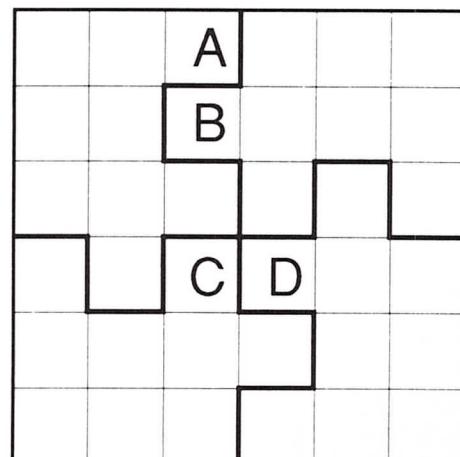
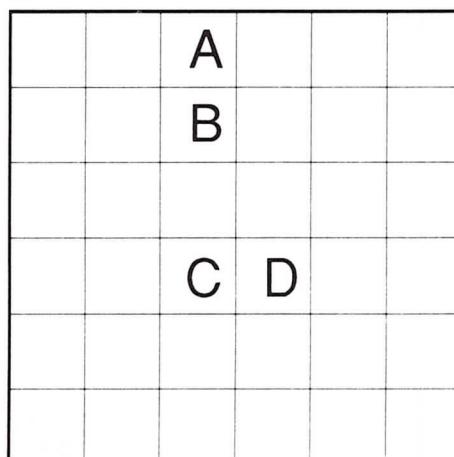
	=4
	=6
	=2
	=7
	=9



### 13. SPLIT INTO THE SAME SHAPE

Divide the diagram so that every segment contains one letter and every segment has the same shape.

EXAMPLE



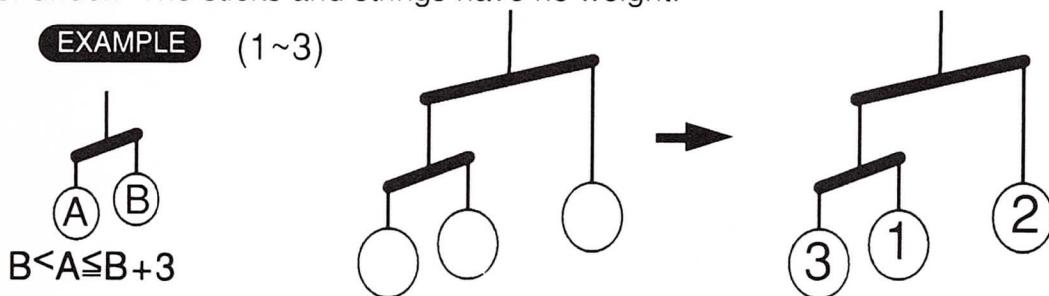
## PART 10 INSTRUCTIONS

### 14. UNBALANCED MOBILE

Place the ten weights from 1 to 10 ( in the example : from 1 to 3 ) so that each part of the mobile never balances. The difference between the right weight and the left weight must be 3 or under. The sticks and strings have no weight.

EXAMPLE

(1~3)



### 15. FROM THE FOUR CORNERS

Place the nine blocks in the diagram in such a way that the four numbers at each crossing add up to 10. One block will be left after you solve the problem. You must not turn the blocks.

EXAMPLE

11 21	11 31	12 22
12 31	13 44	24 12
32 12	41 14	44 12

	67	
	54	

12 31	11 21	44 12
11 31	67 54	12 22
41 14	32 12	24 12

### 16. MATCH DIVISION 4 • 3 • 2

Using four matchsticks divide the form into 4, 3 and 2 pieces of equal area. The pieces need to be same shape.

### 17. PLAY BALLS

Which two pairs can be used to form the solid shown?

### 18. CRISSCROSS

The puzzle below is different from a crossword puzzle in that you have to fill in figures, not words. By using the clues, you should be able to find the only possible solution.

Example: A7 x 4 means that you should fill in the figure that goes with 7 across, multiplied by 4. You should put digits in the grid one per square, two-figure numbers in two consecutive empty squares, and three-figure numbers in three empty squares. You will never use zero as the first digit of a number. There are no negative numbers used here.

EXAMPLE

1		2	
		3	4
5	6		
	7		

#### ACROSS

- 1 A3 x A5 ÷ 4
- 3 A7 - D2
- 5 ?
- 7 A5 + D6

#### DOWN

- 1 A5 x A5
- 2 ?
- 4 A7 x 4
- 6 (A3 + 300) ÷ 4

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



## PART 11 INSTRUCTION

### BUILDING BLOCKS

There are some of blocks in the puzzle. How do you put the blocks together and make the rectangular solid ?

## PART 12 INSTRUCTIONS

### 1. 100 ERRORS

We made puzzles with a Turkish and Japanese traditional pictures. There are 50 differences in each pair of pictures. Find as many differences as you can, cooperating with your team-mates.

### 2. ORNAMENT

Interweave rings so that they form the shape shown on the layout. All colour spots on the rings must be hidden inside the final shape, so that you can not see them from either side of the shape.