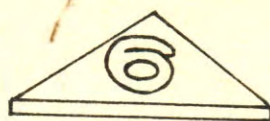
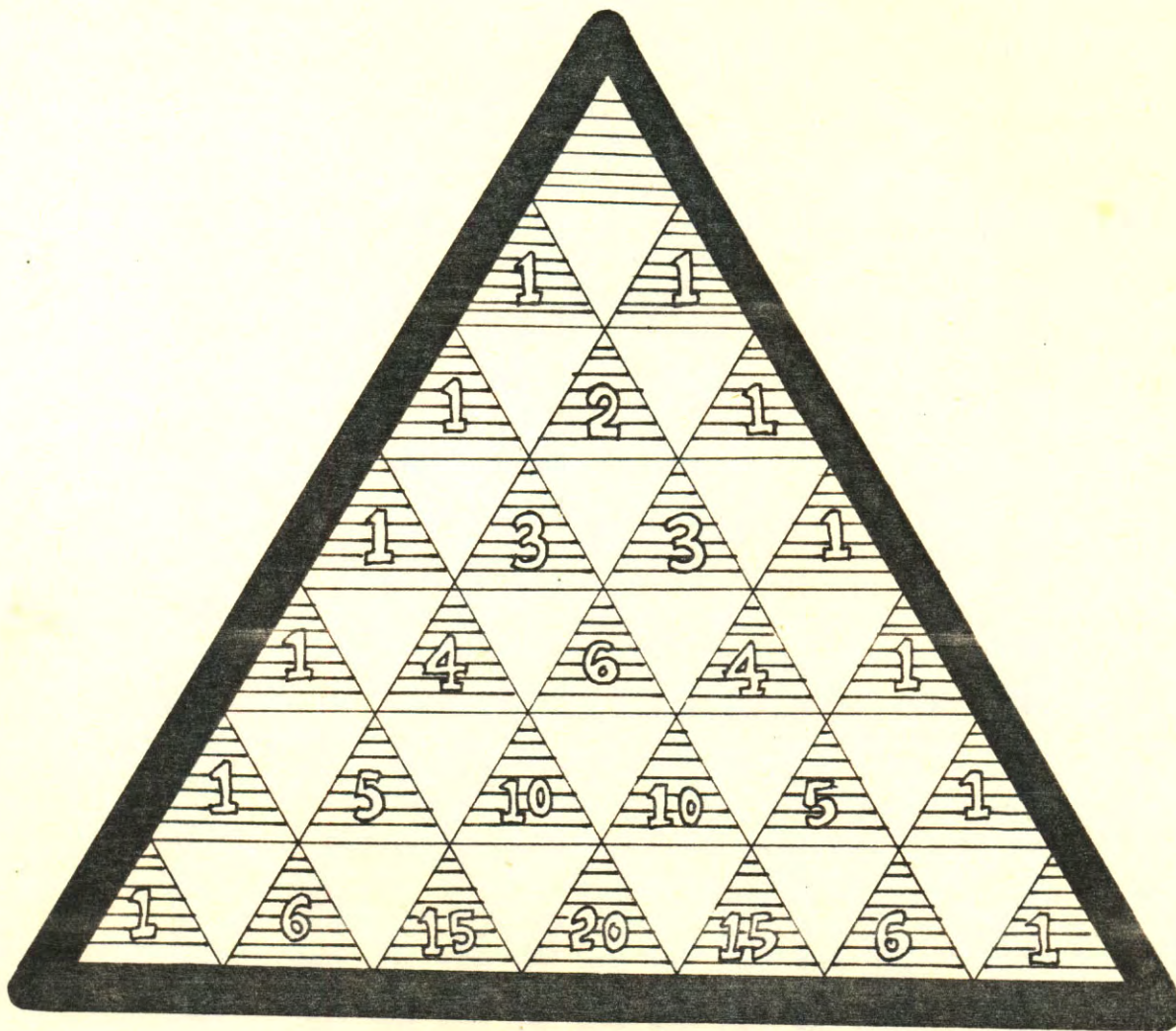


PASCAL'S NUMBER TRIANGLE



Pascal's triangle is a reference to find probability of combination. To make a pascal's triangle, fit in the small numbered triangles in the gap provided on the bigger triangular board. But the logic - the sum of any two numbers is always the number just below the number at the vertices of the number triangle.

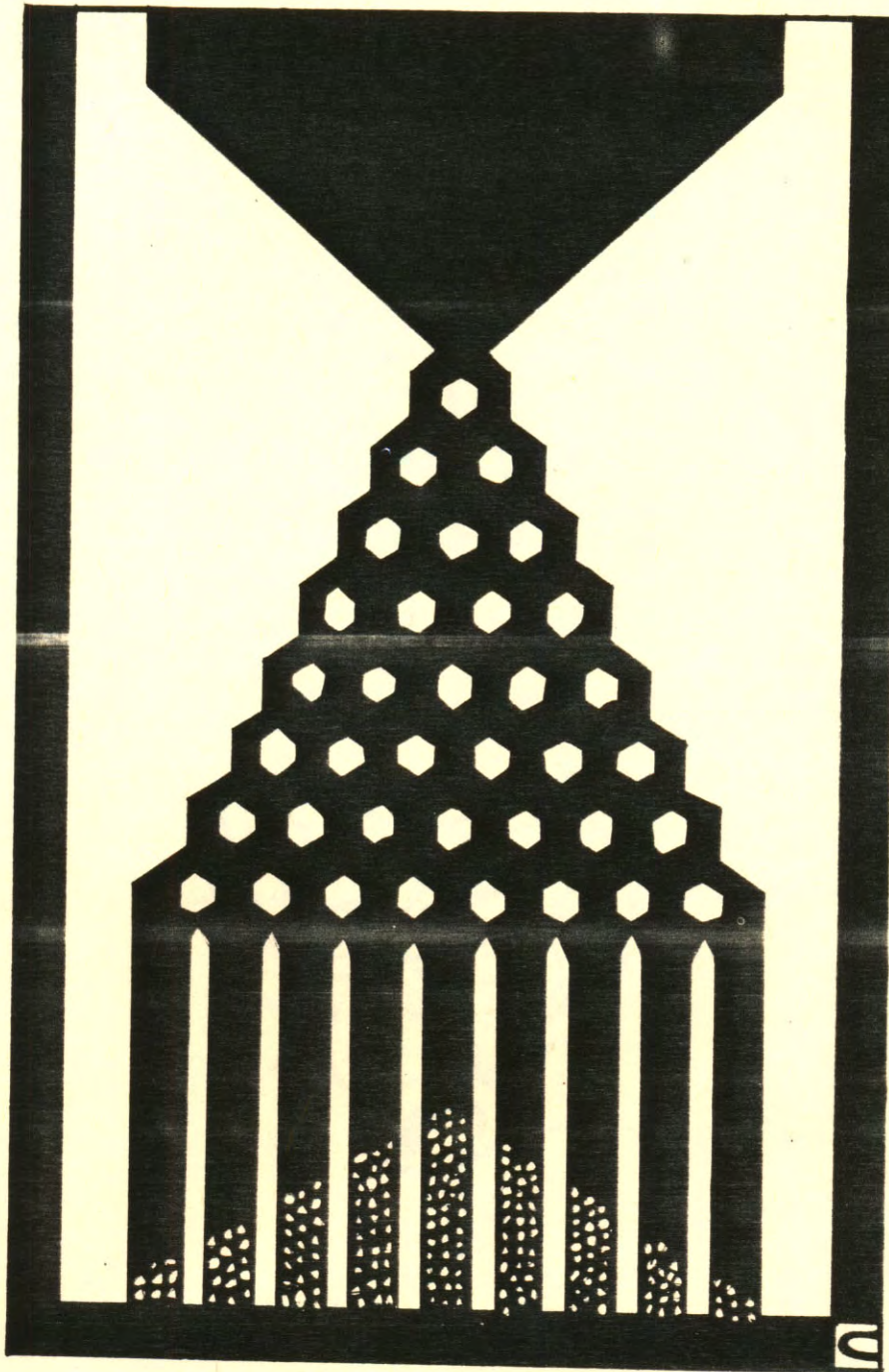
This simple device can also be used to find the probability of any combination by adding the numbers in that row. For example, in a triangle of 6 rows, the last row has six numbers and their sum is 64. Therefore, the probability of any combination of 6 numbers will be 1 to 64. Similarly, the next higher row is the probability of 5 combinations.

PTO

HOW TO PLAY?

Place the small numbered triangles in the gaps in the bigger triangular board. To find the probability of any combination, add the numbers in a particular row.

PROBABILITY KIT



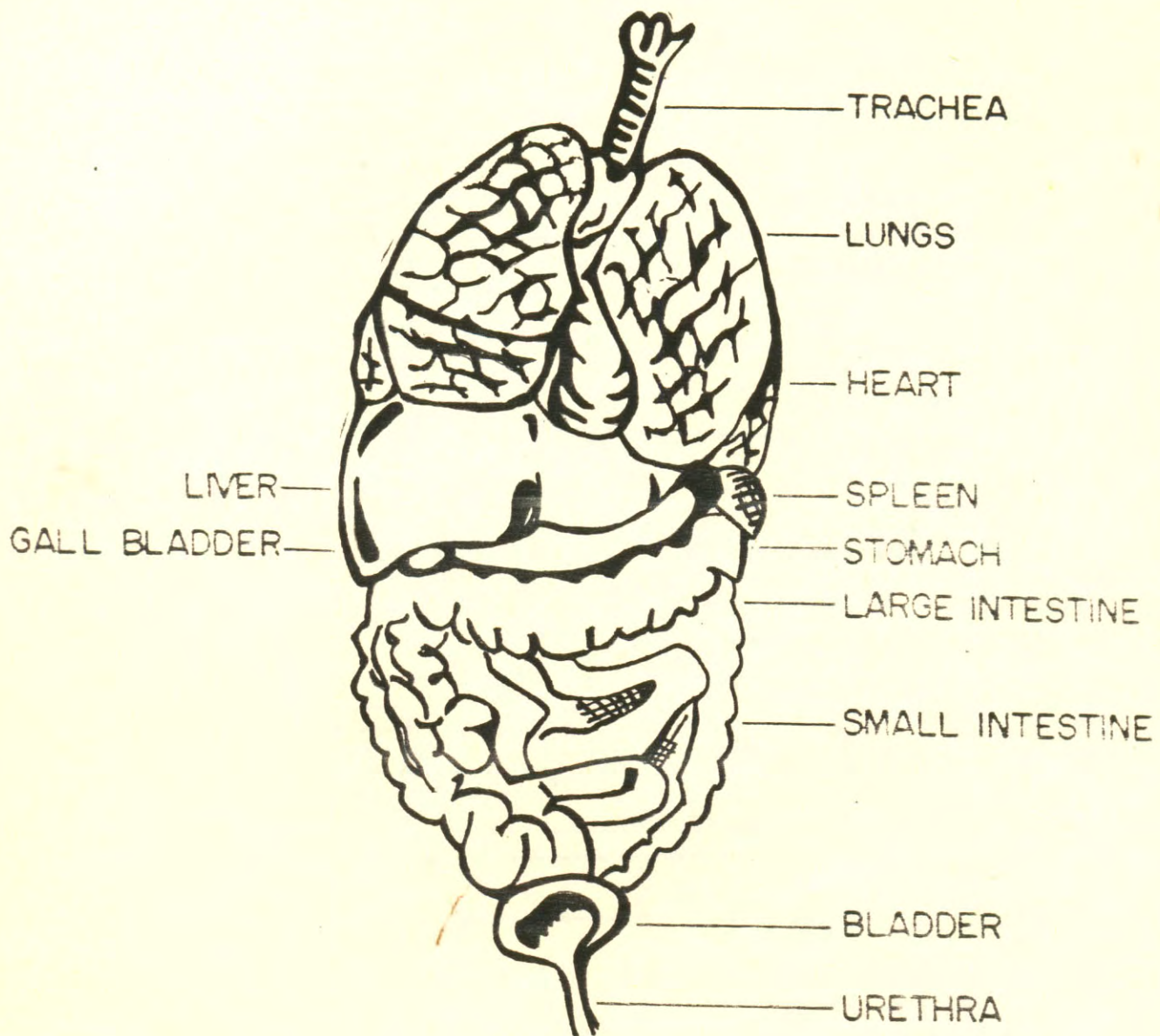
When a coin is tossed, number of times, the probability of getting head and tail is half and half. Similarly, when number of beads are dropped across the channel of the board, the distribution of beads forms a definite pattern. This is known as normal probability distribution.

Drop the beads and watch the pattern.

Observe the distribution of beads for a definite number (100), when dropped together.

This device of finding probability distribution is known as Galton's Board.

HUMAN INTESTINE ASSEMBLY KIT



Human intestine is a delicate machine of nature. The functions of intestine are so efficient that these are difficult to incorporate in man-made machines. It crushes the foodstuff into fine particles and different components are separated, to be used in different parts of the body. The waste is released in the form of excreta and urine.

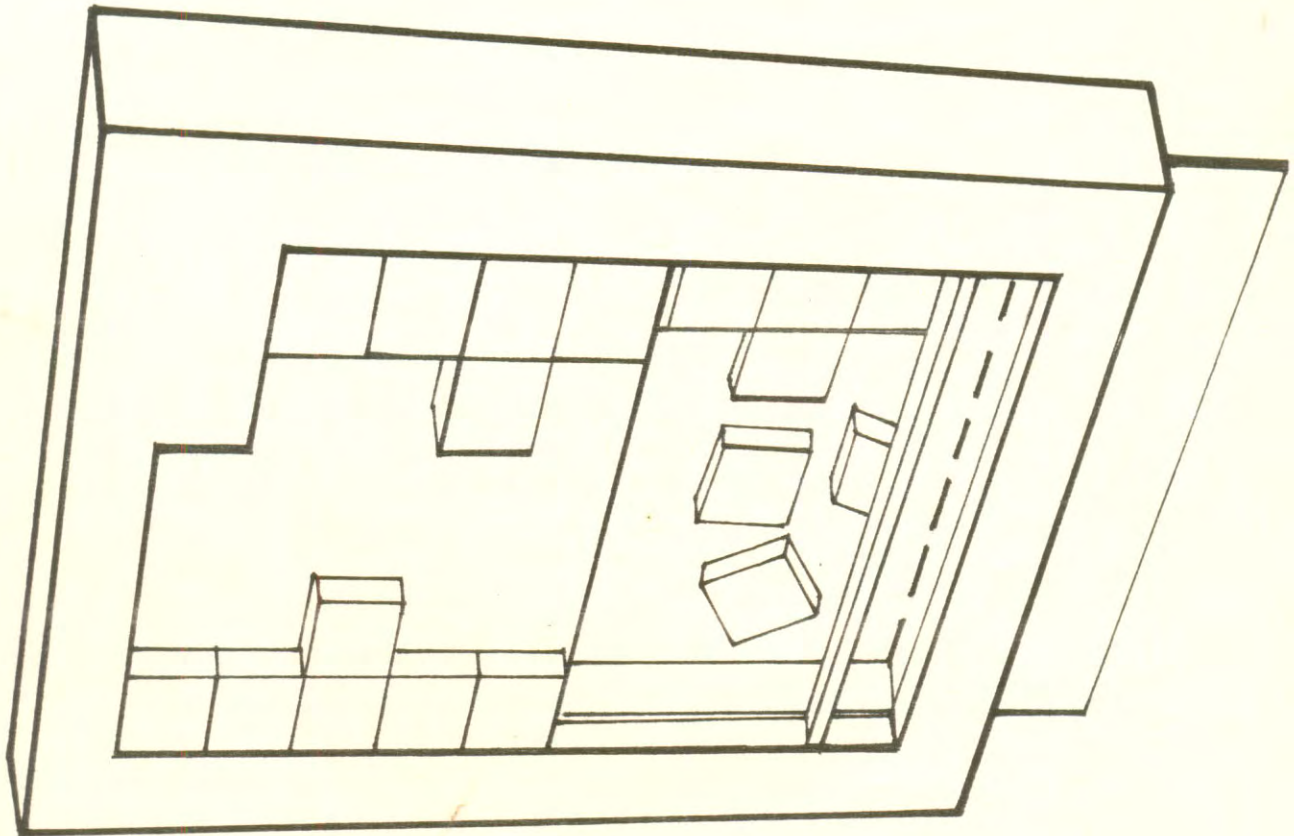
Here are some pieces cut out of a drawing of an intestine, which are to be reassembled to make it look like an intestine again. Match the assembly with the drawing given above and identify the parts.

Faster this exercise is completed, better the logical power.

PERFORMANCE

<u>Time</u>	<u>Standard</u>
30 seconds	Excellent
45 seconds	Very Good
60 seconds	Good
90 seconds	Fair
120 seconds	Poor, try again

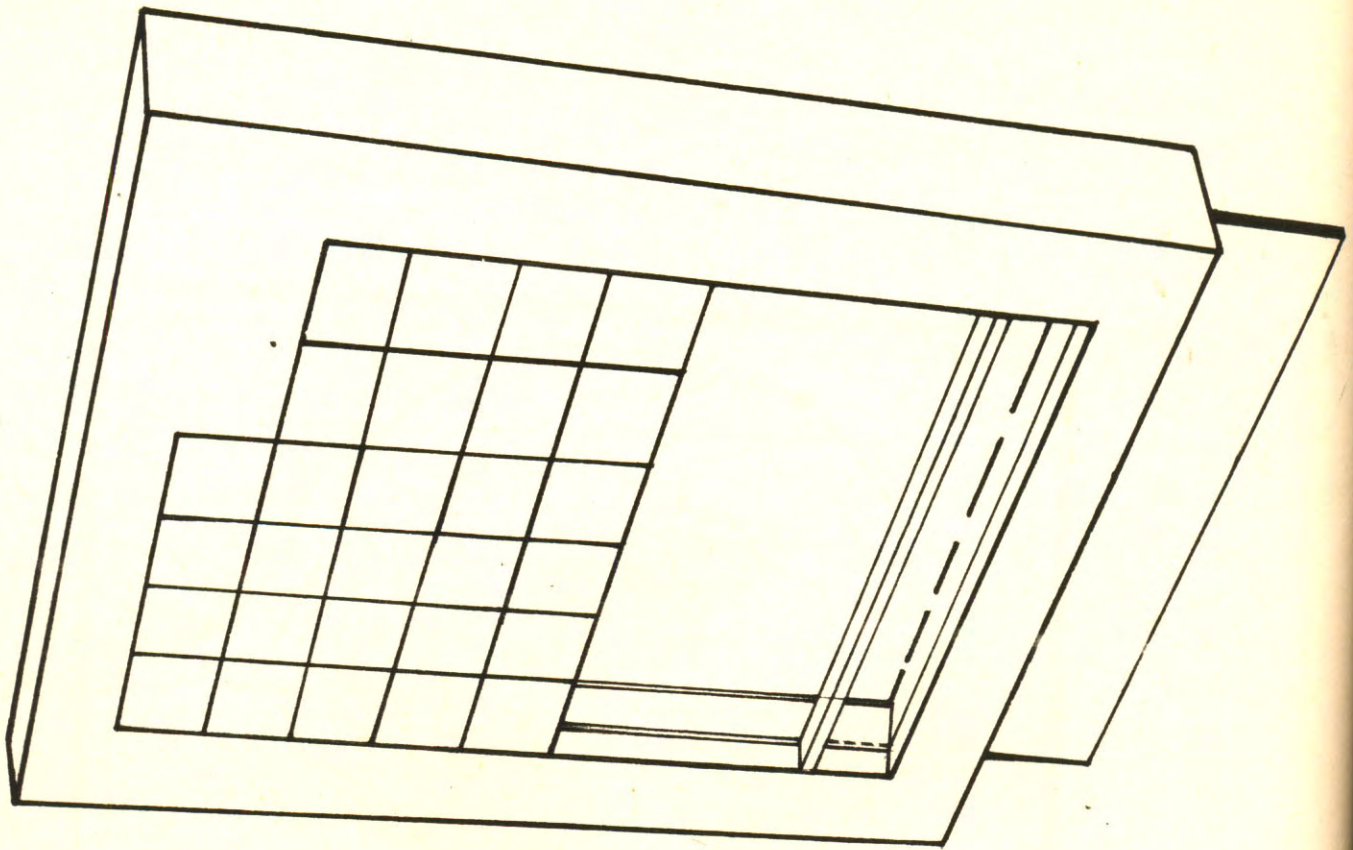
EQUAL AREA KIT



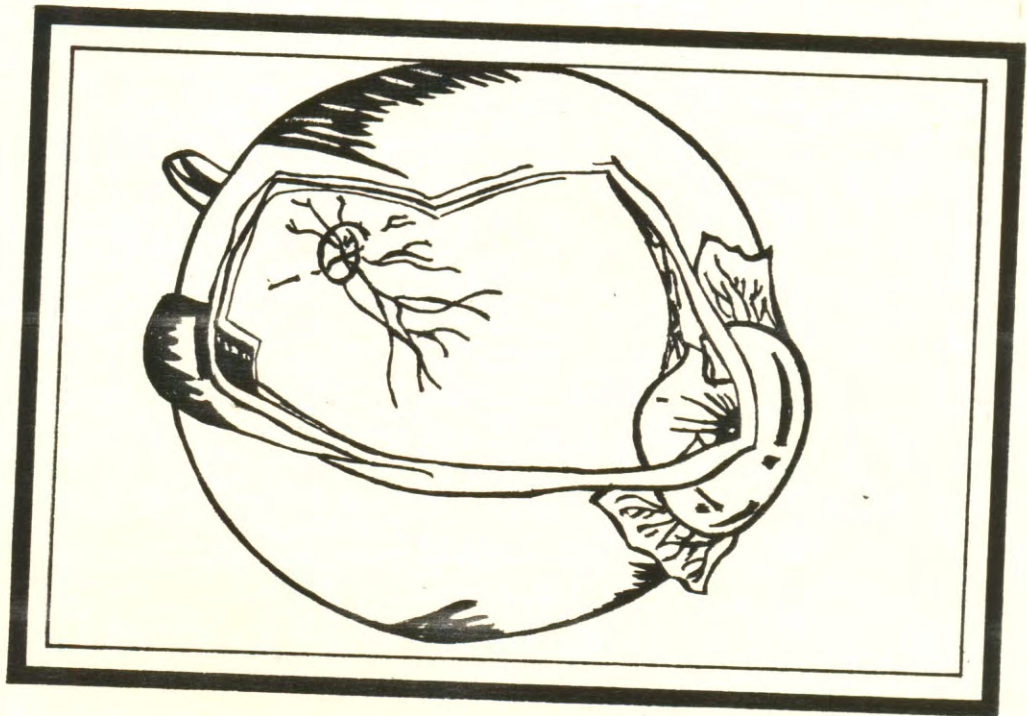
It is a logic kit of area conservation. 14 yellow squares and 14 red squares exactly match the white area on the board. You have to arrange the yellow and red pieces in such a way that yellow and red areas thus formed are identical.

CLUE:

In any area distribution in equal half, first whole area should be filled with alternate arrangement of two colour pieces. Similar areas can be interchanged to get identical but distinct areas.



HUMAN EYE ASSEMBLY KIT



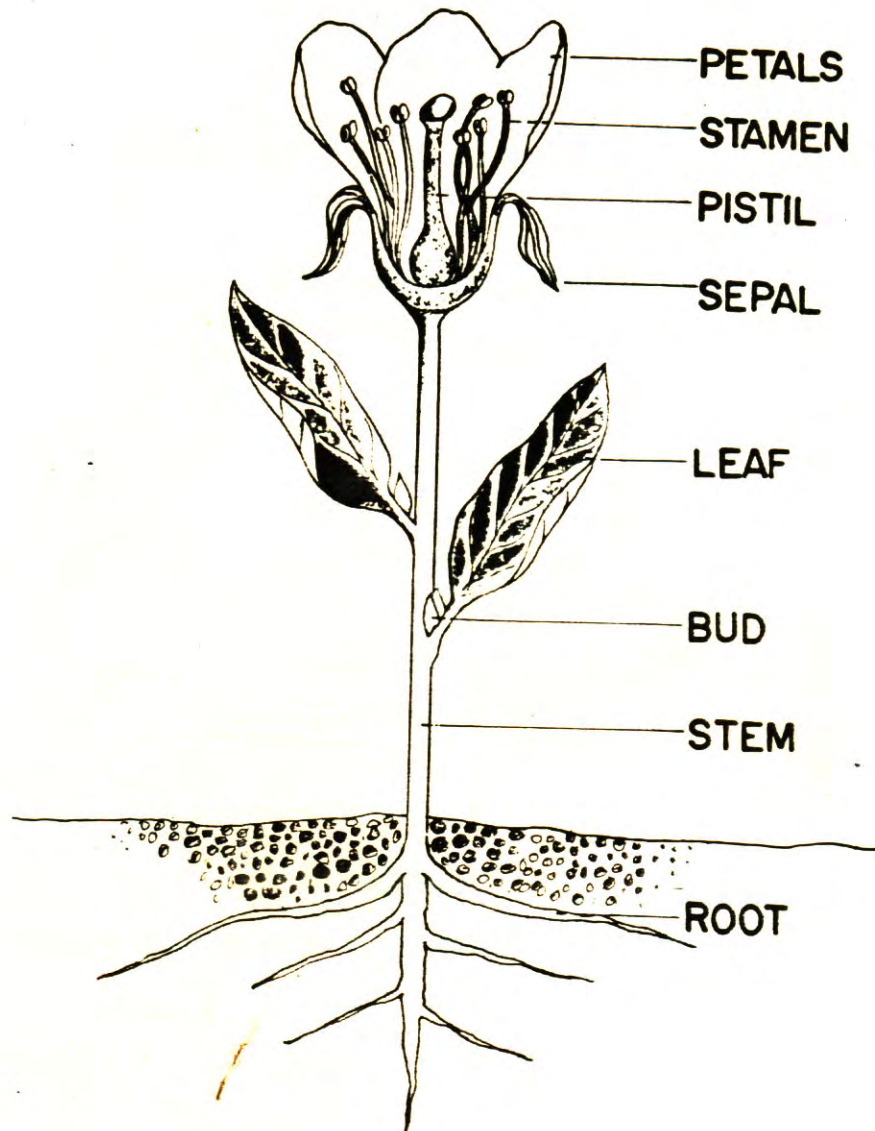
Human eye is a delicately engineered piece of nature. Even in most of the modern cameras, it is difficult to incorporate all the mechanisms which the human eye has.

Here are some pieces cut out of a model of an eye which are to be assembled to look like an eye.

Complete the exercise in minimum time and identify the parts of the eye and match with the drawing.

Maximum time allowed to complete the exercise is 15 minutes.

PLANT ASSEMBLY KIT



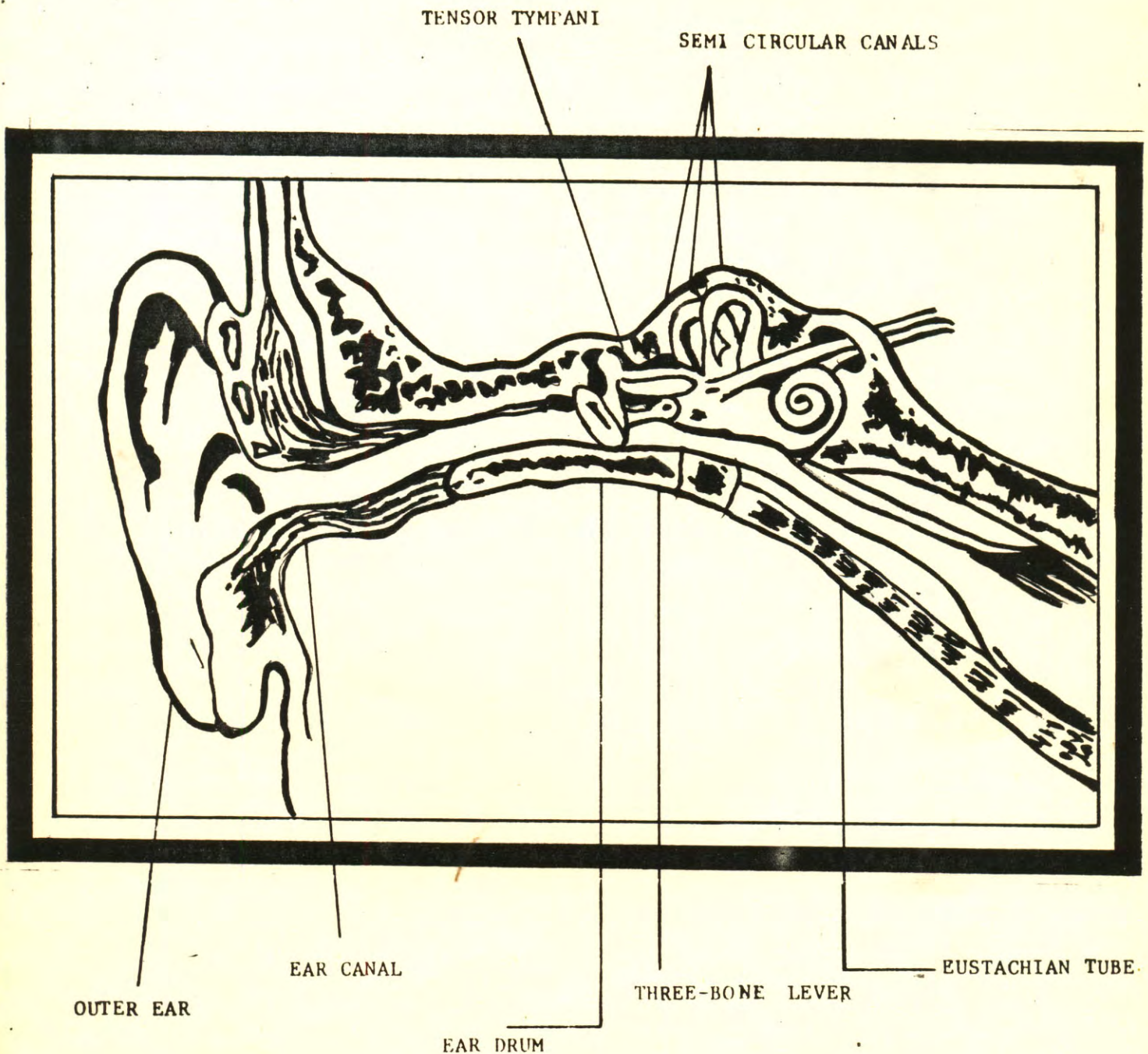
All plants have some common parts such as root, stem, leaf, bud, branch, flower and fruits. However, each part is again divided into sub-parts. For example, flower has a pistil, stamen, petals, sepal.

Here are some pieces cut out of a drawing of plant, which are to be reassembled to make it look like plant again. Match the assembly with the drawing given above and identify the parts.

Faster the assembly is completed, better the logical power.

<u>Time</u>	PERFORMANCE	<u>Standard</u>
30 seconds		Excellent
45 seconds		Very Good
60 seconds		Good
75 seconds		Fair
90 seconds		Poor, try again

HUMAN EAR - ASSEMBLY KIT

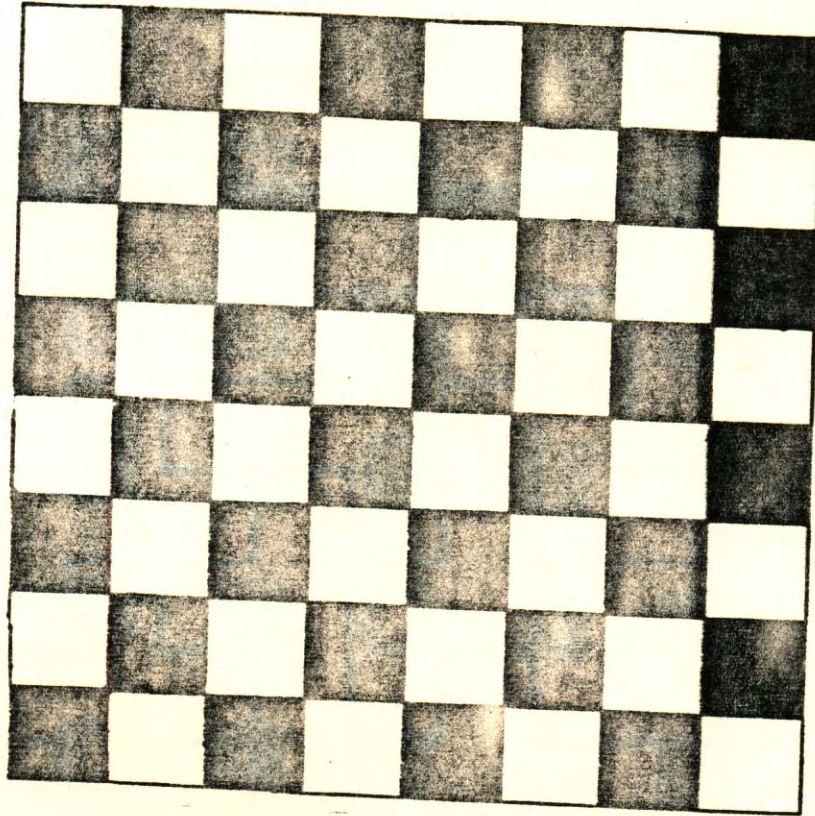


Here are some pieces cut out of a model of human ear which are to be assembled to look like a human ear.

Complete the exercise in minimum time and match the figure with that given.

Maximum time allowed is 15 minutes.

CHESS BOARD PUZZLE



It is a puzzle of constructing a 8x8 chess board out of the 13 pieces provided. Join the pieces to make a chess board.

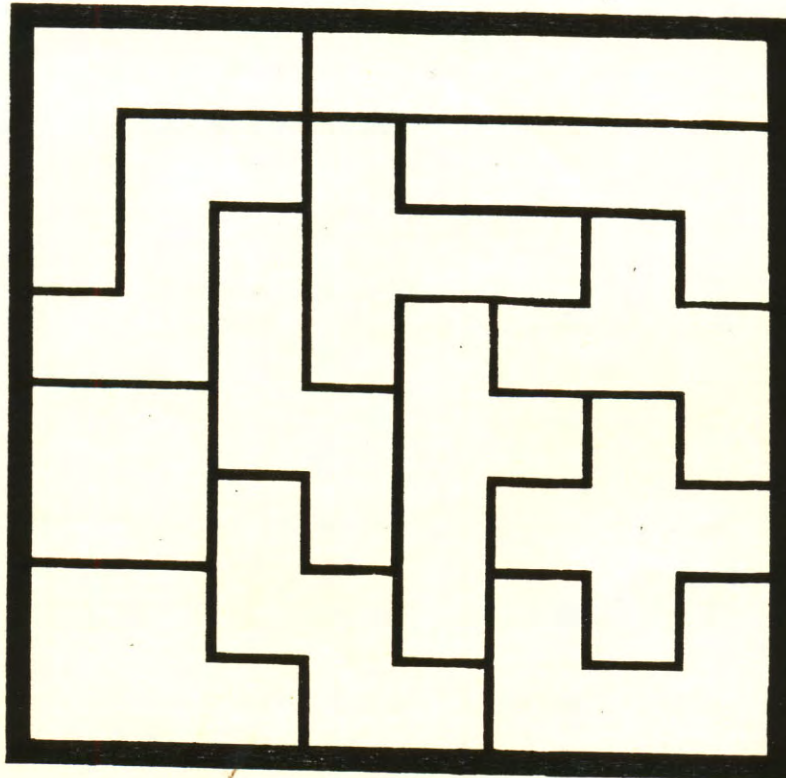
CLUE:

There are some pieces permanently fixed on the board for guidance.

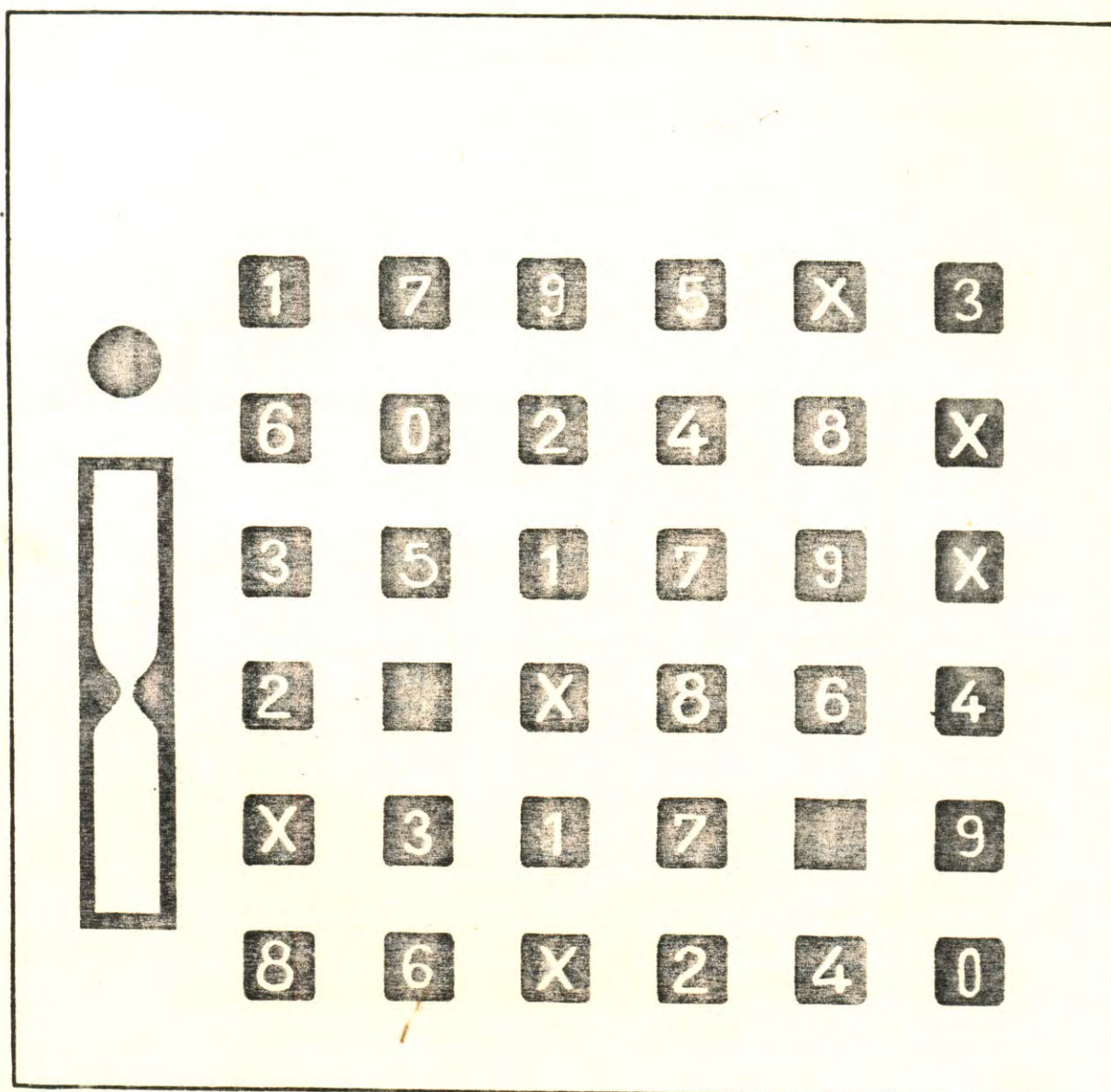
PTO

PERFORMANCE

<u>Time</u>	<u>Standard</u>
5 minutes	Excellent
8 minutes	Very Good
10 minutes	Good
12 minutes	Fair
15 minutes	Poor, try again



NSC NUMBER GAME



There is a good chance for you to complete with your friend in making biggest number using the numbers on the rolled cubes. The NSC number can only be made based on the following set of rules.

WHAT IS A NSC NUMBER?

1. It is an NSC number if it is 0, 2, 4, 6, 8.
2. It is an NSC number in case of two digit expression if first number is 1, 3, 5, 7, 9 and second an NSC number.
3. It is an NSC number in case of three digit expression if first digit is 1, 3, 5, 7 or 9 and second and third digits are NSC numbers.

PTO

4. It is an NSC number in case of 5 digits expression if all digits are either of 0, 2, 4, 6 or 8.
5. It is an NSC number in case of four digit expression if two digit NSC number is prefixed and suffixed by X

For example: - 2 is an NSC number
 94 is an NSC number
 3, 94 is an NSC number
 X94X is an NSC number

Similarly NSC numbers can be made with larger number of digits such as 1, 350246 is an NSC number.

HOW TO PLAY?

Take the stock of 36 cubes numbered 0-9 and X on any face of the cubes.

Exercise - I

Pick up two red cubes (even numbered) and two blue (odd numbered) cubes from the stock pile.

Roll the cubes on the floor and try to make a biggest NSC number using maximum number of cubes out of the rolled cubes. Once you are ready with biggest number challenge your friend to make a number bigger than yours. If he makes, you lose otherwise you win.

NOTE:

The number making exercise should be completed within the time given by sand hour time keeper.

In case there are more than two players the same exercise proceeds in an order. Whoever, makes biggest number is the winner.

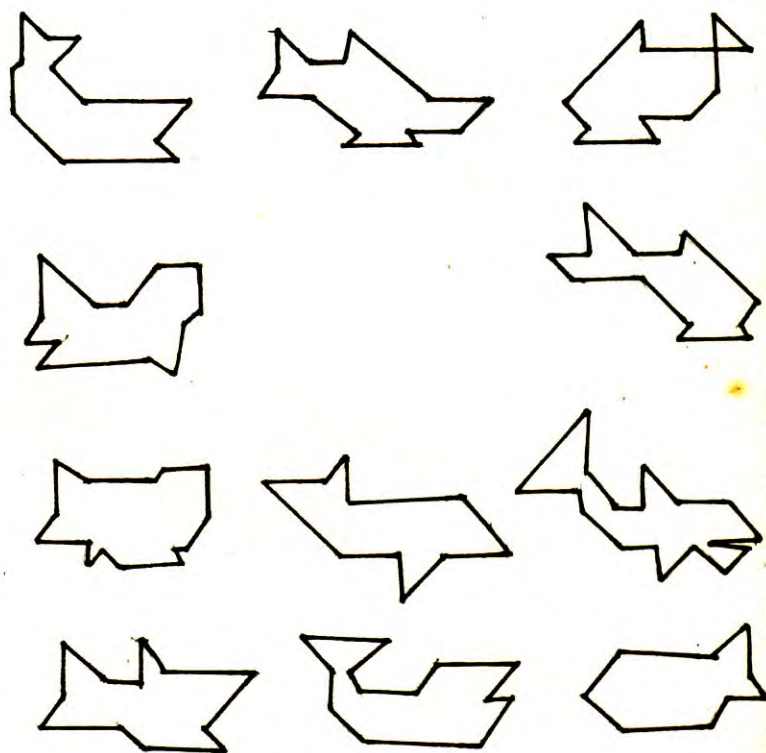
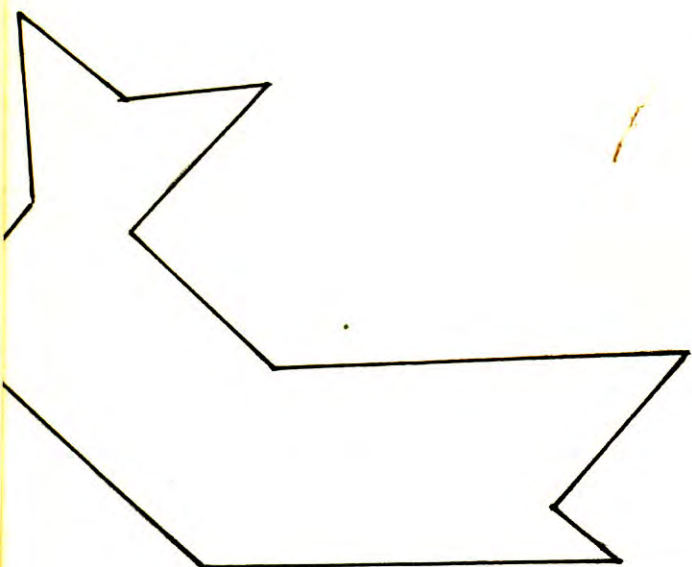
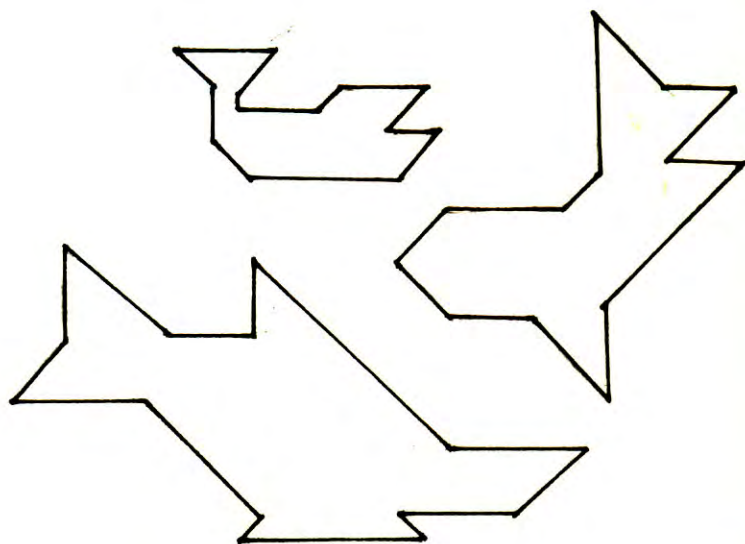
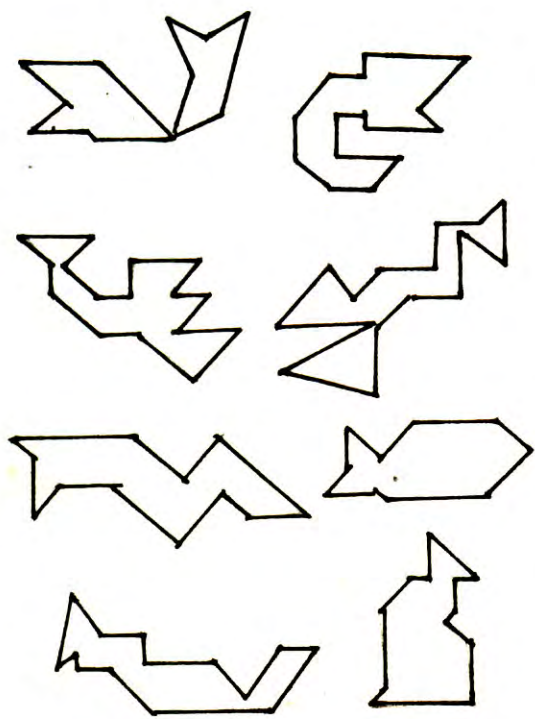
The game can be played with more number of cubes in similar way as Exercise-I.

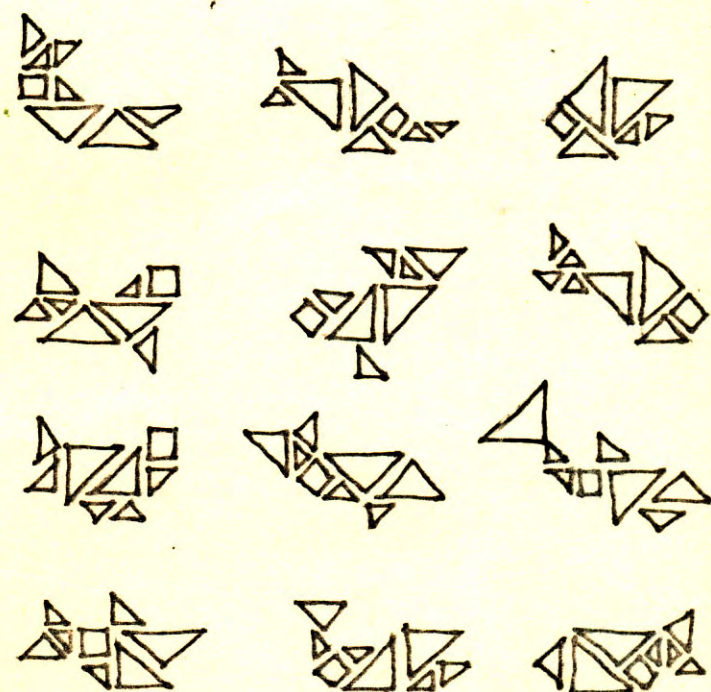
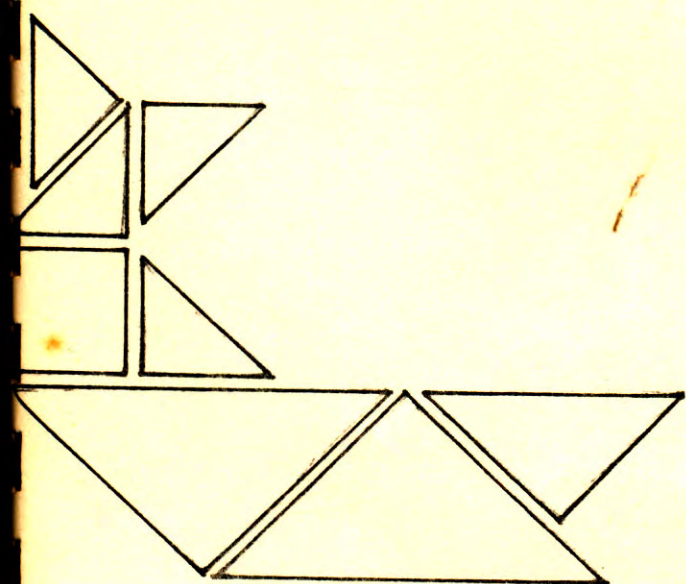
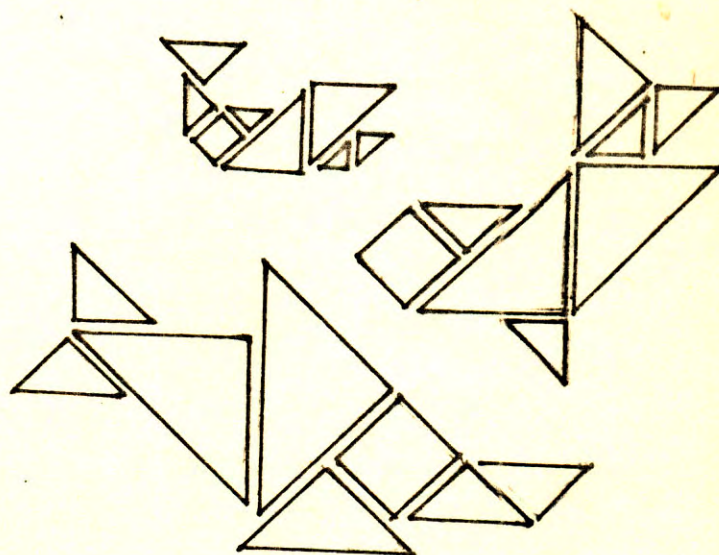
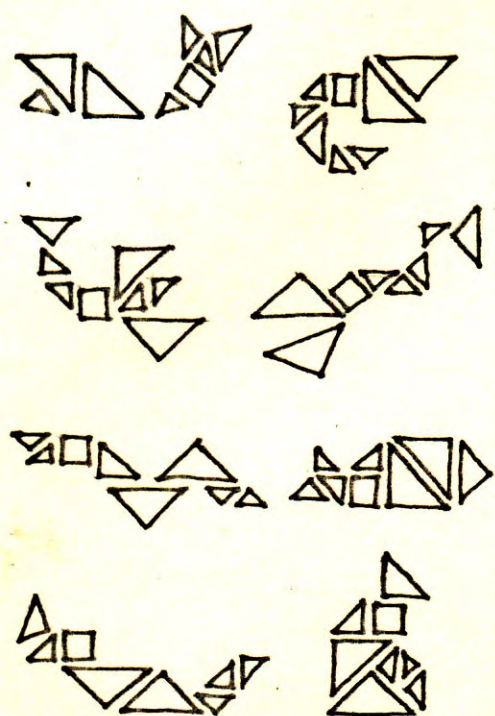
TANGRAM 2

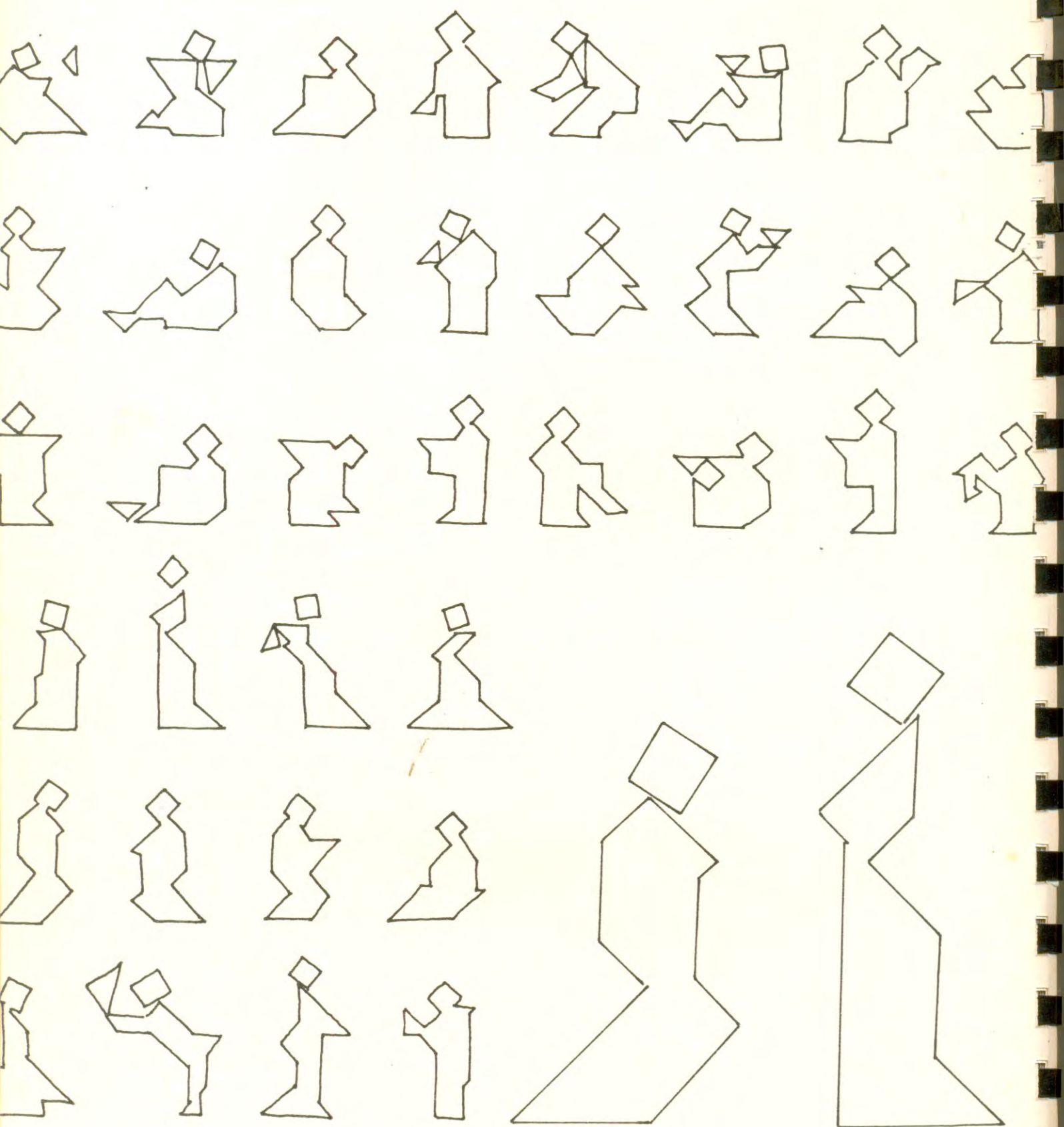
Can you imagine that 1600 different patterns can be made out of these 8 pieces of a square ?

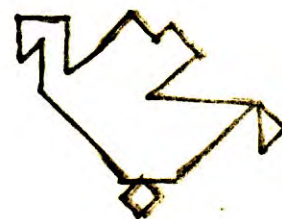
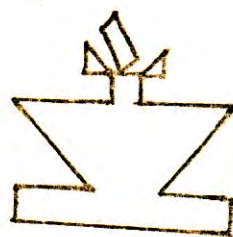
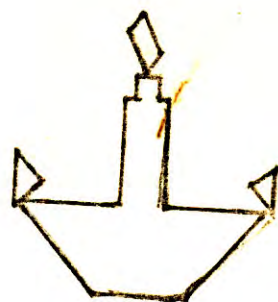
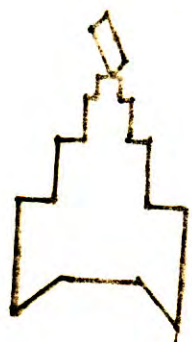
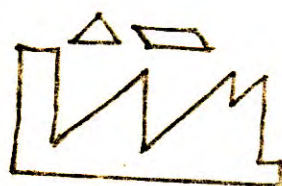
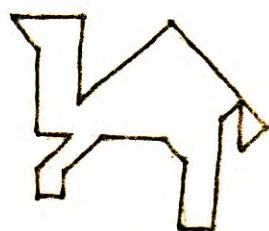
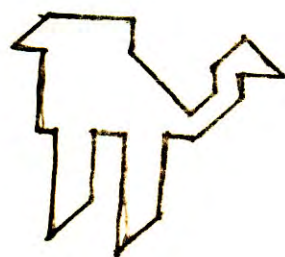
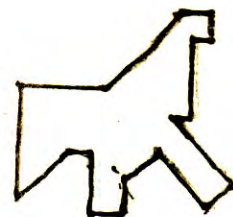
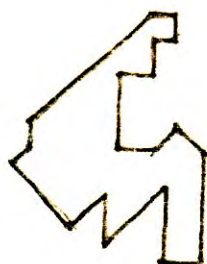
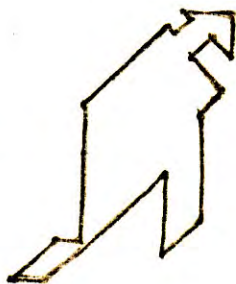
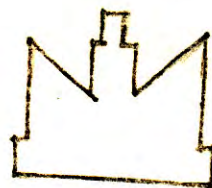
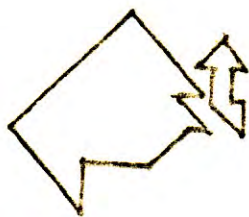
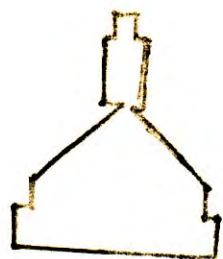
This is what ancient Chinese used to do different pictures like animals birds etc., were made out of these pieces by joining them together.

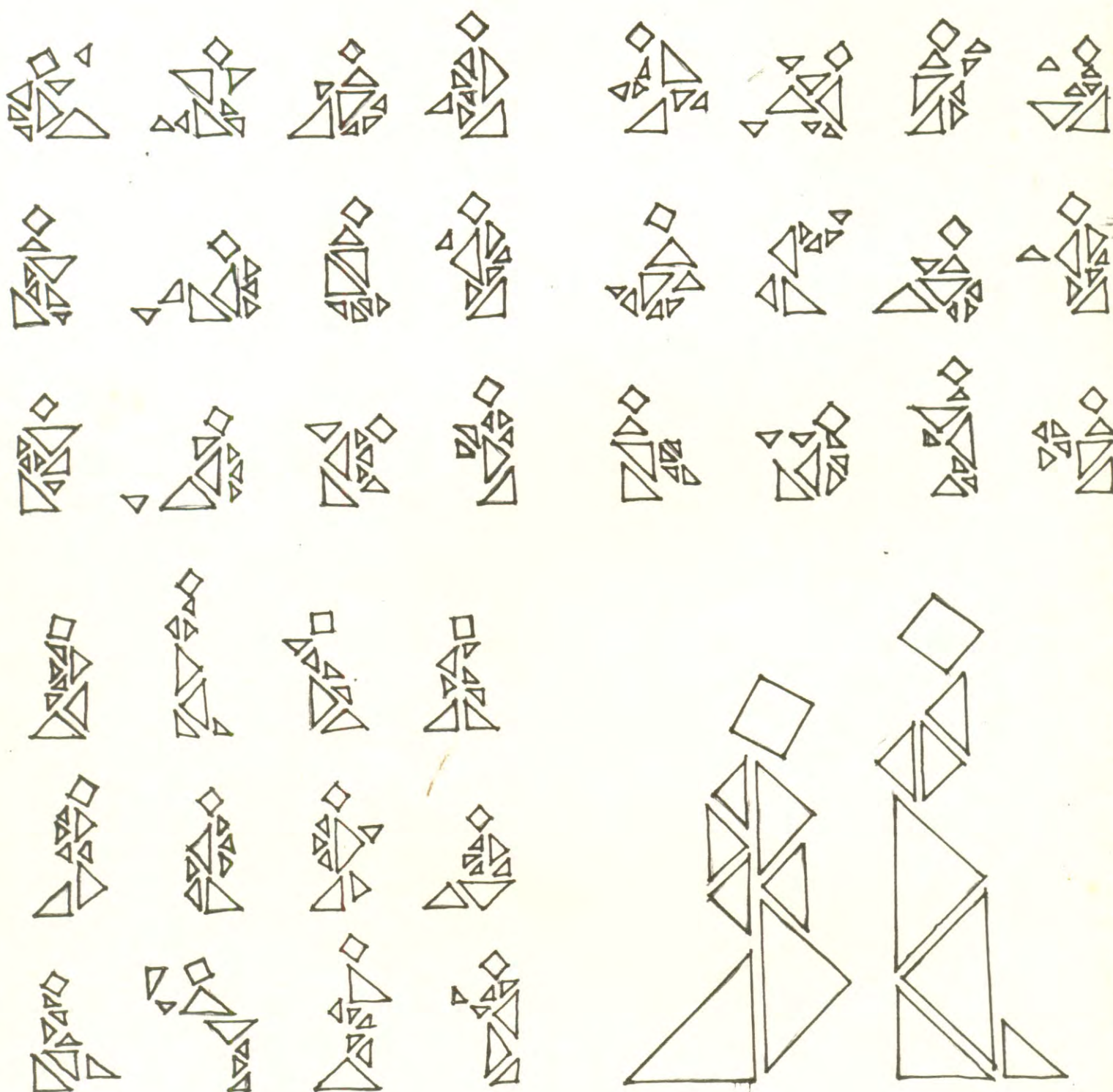
You too can make many interesting patterns as drawn here. In case of difficulty, see the reverse for solution. Maximum time allowed to make these patterns is 30 minutes.

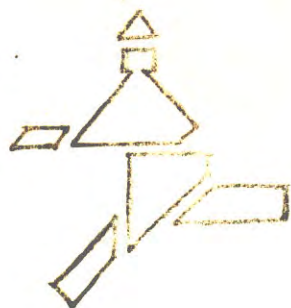
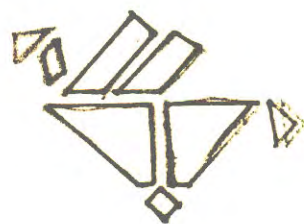
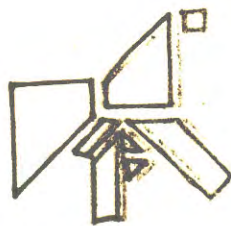
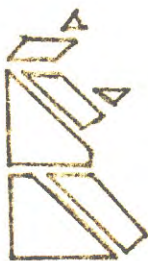
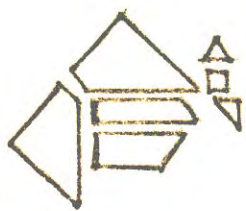
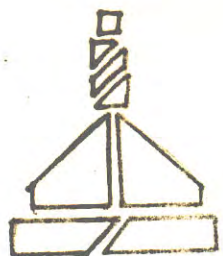










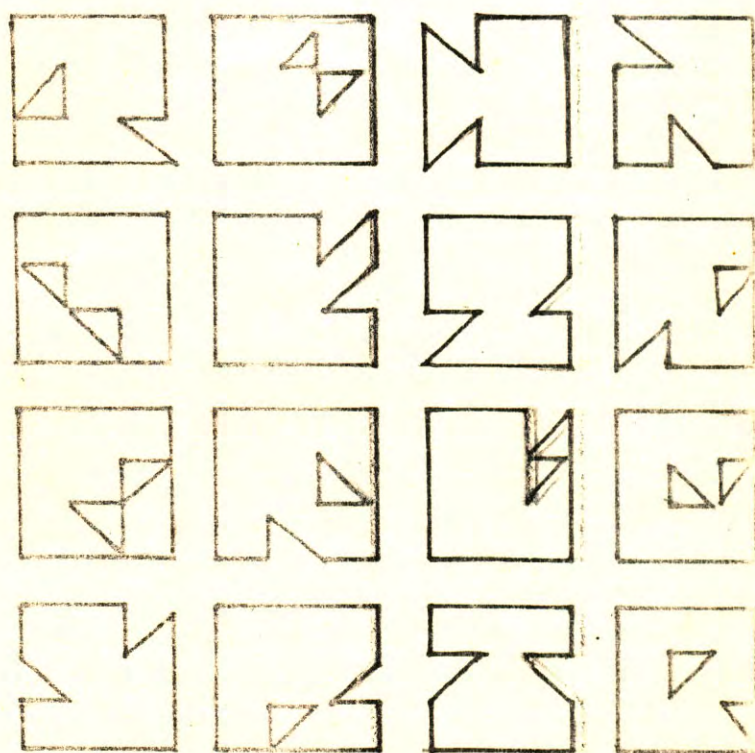
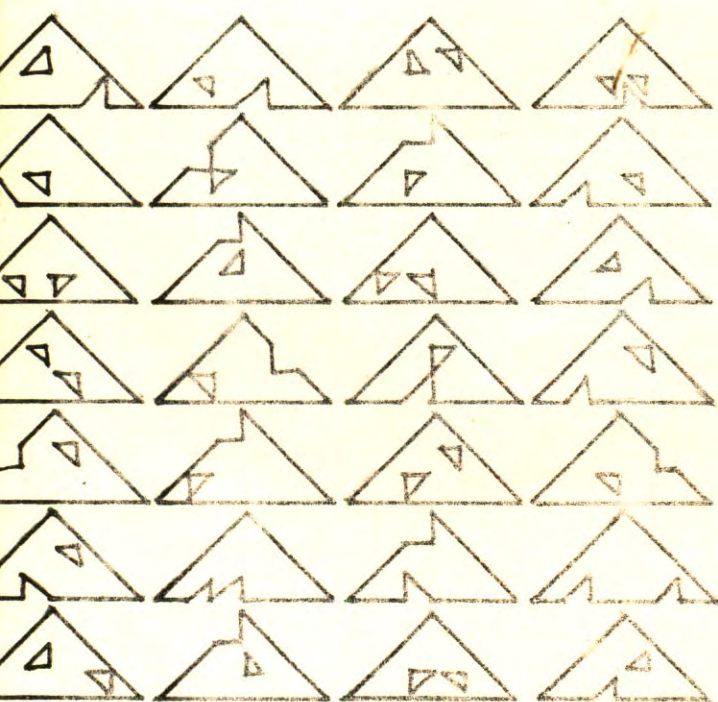
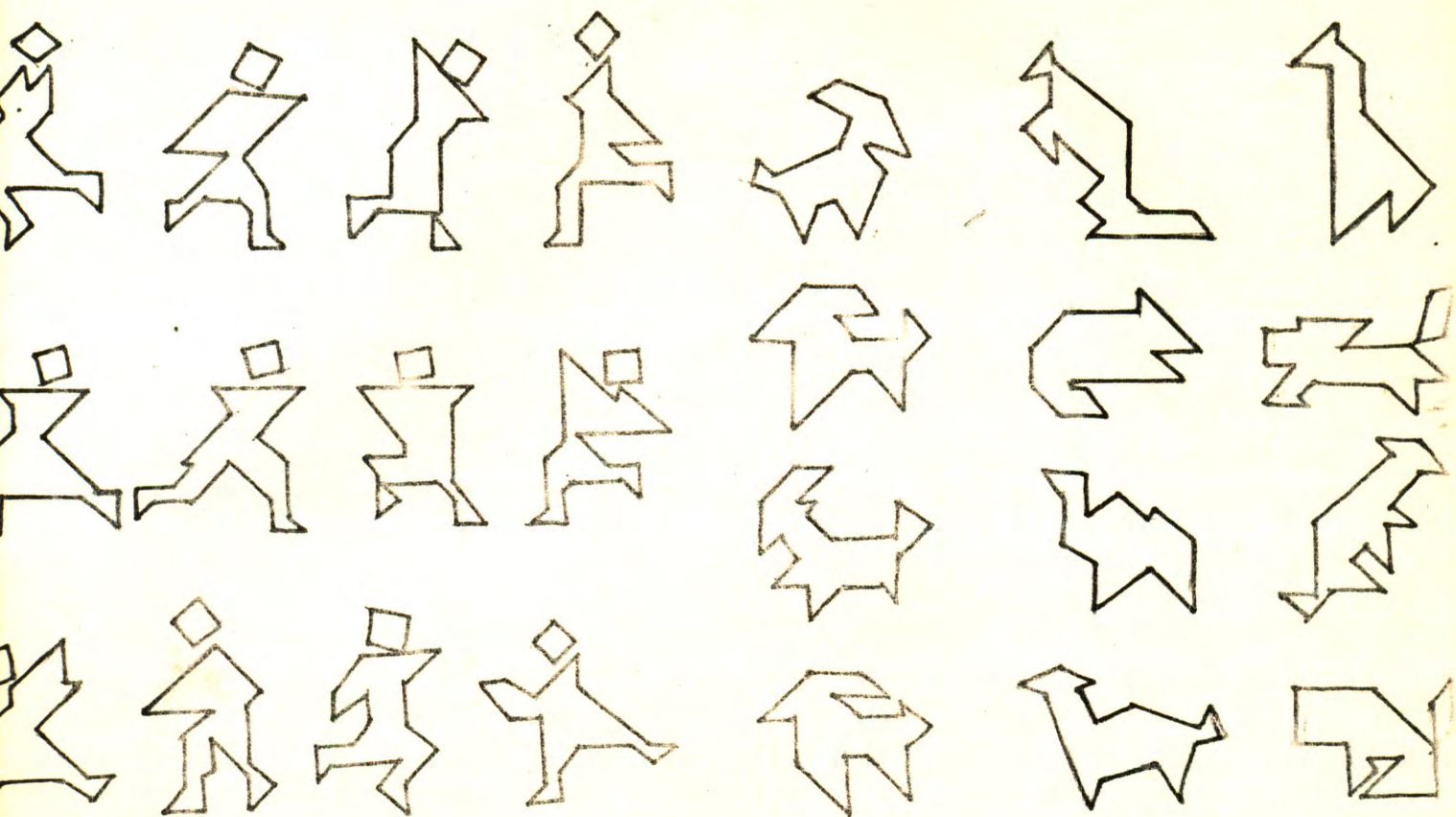


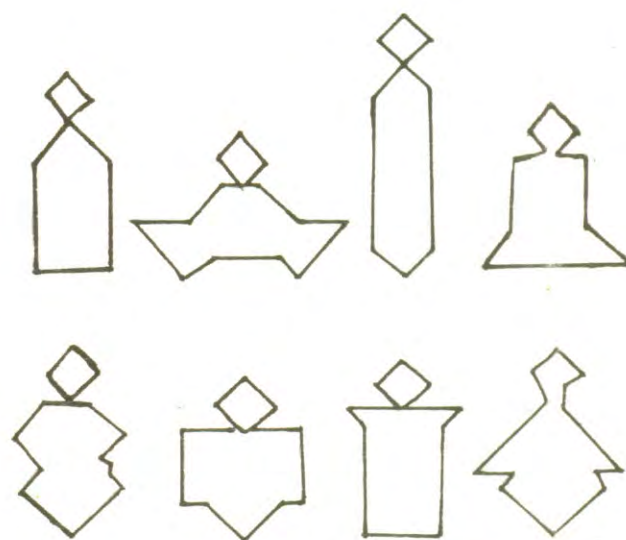
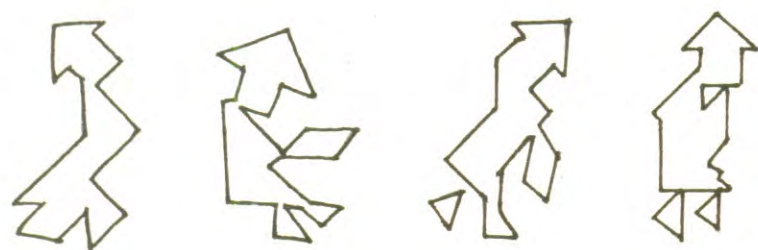
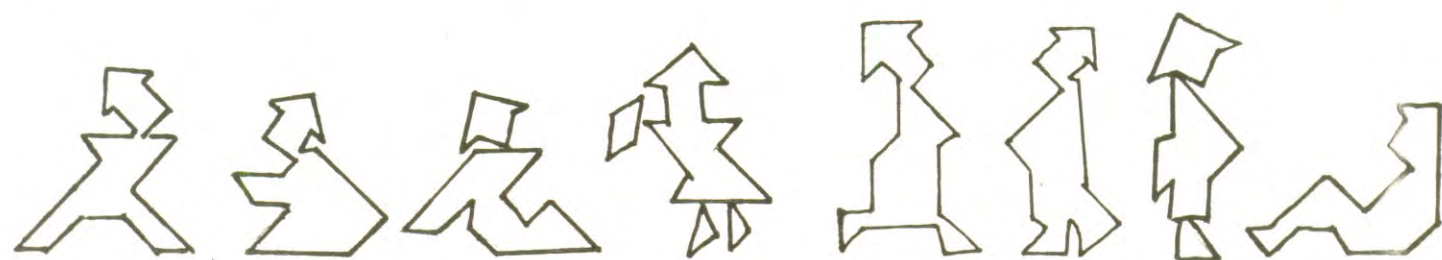
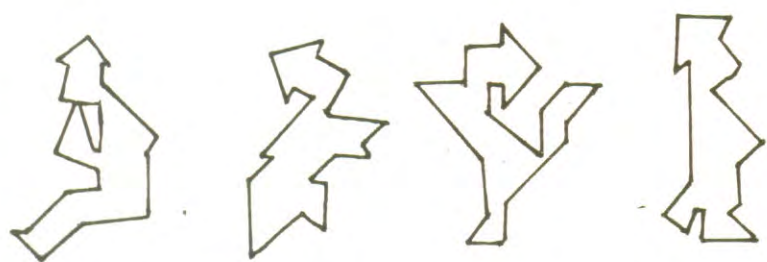
TANGRAM 3

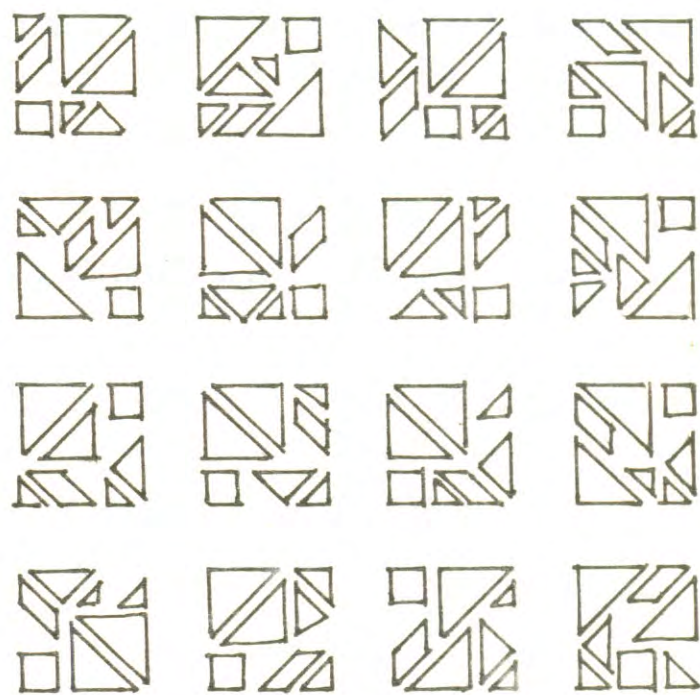
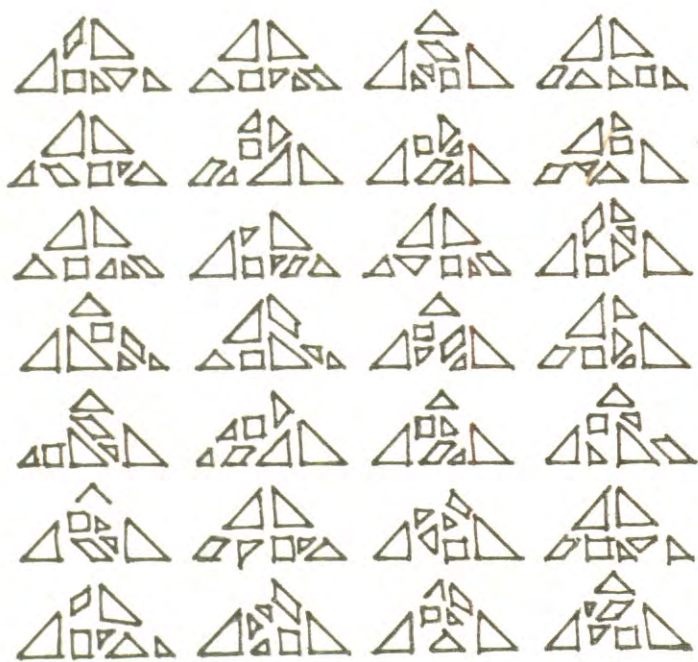
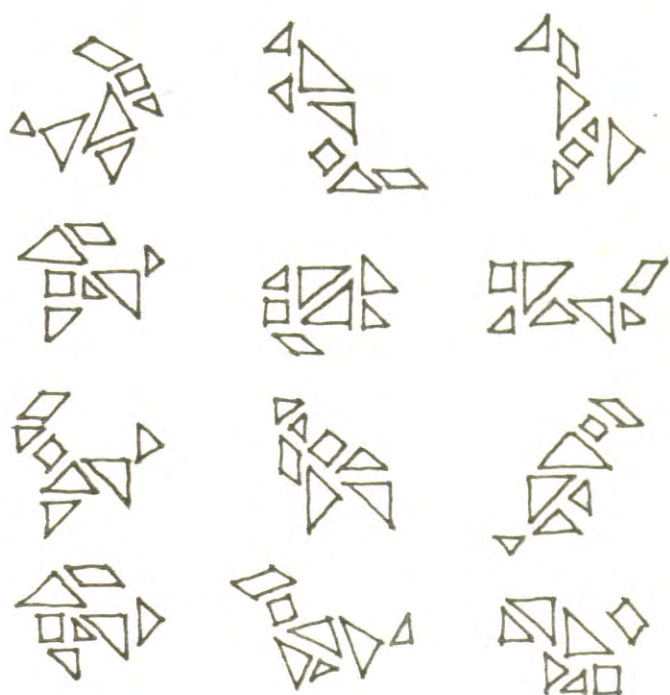
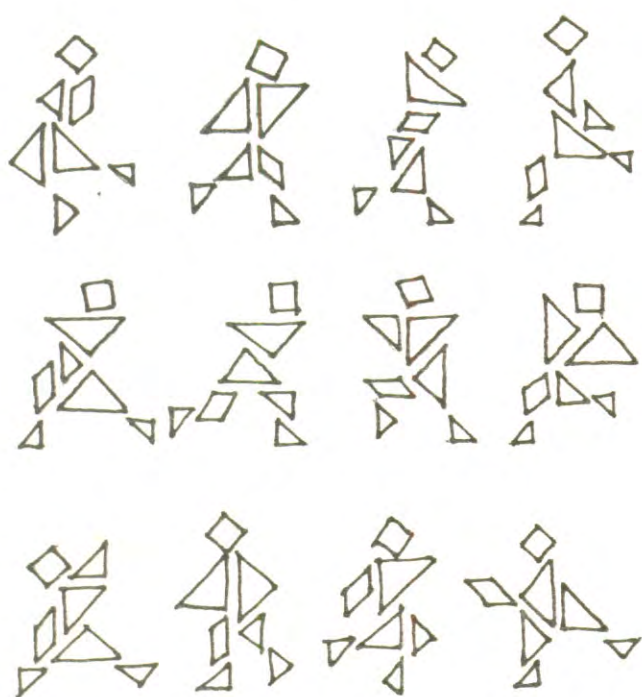
Can you imagine that 1600 different patterns can be made out of these seven pieces of a square?

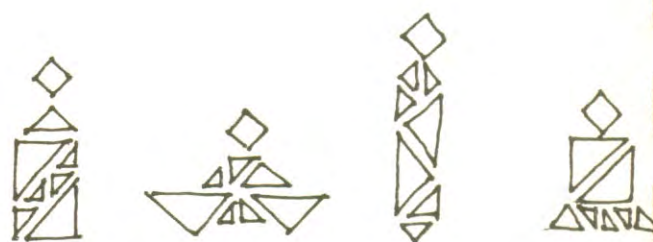
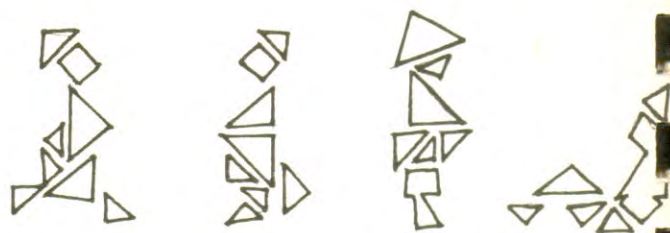
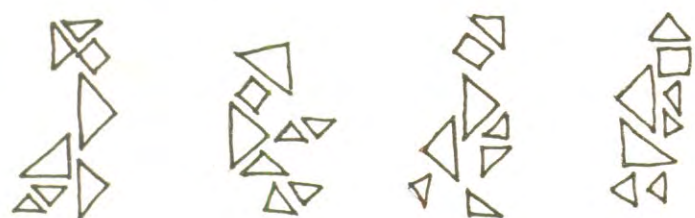
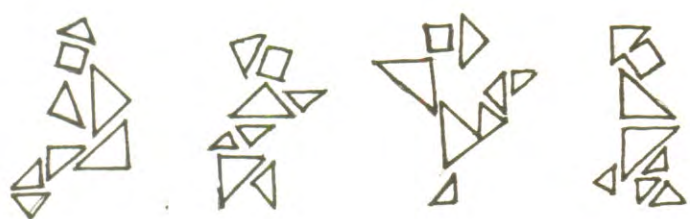
This is what ancient chinese used to do. Different pictures like animals birds etc., were made out of these pieces by joining them together.

You too can make many interesting patterns as drawn here. In case of difficulty, see the reverse for solution. Maximum time allowed to make these patterns is 30 minutes.

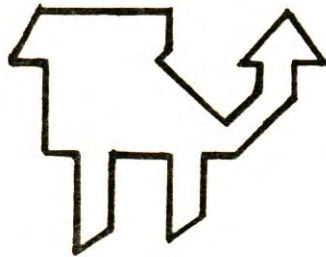
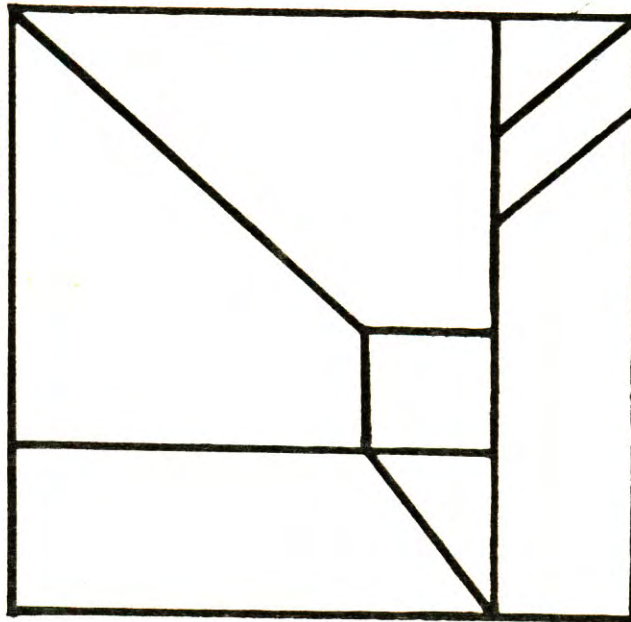








GRAPHICO KIT



It is a passtime of imagination. Many interesting graphics can be made by joining the pieces cut out of one square in different shapes.

HOW TO PLAY

Exercise:

1. Dismantle the square and join the pieces to make a square again.
2. Join the pieces to make 32 patterns as shown on the attached sheet.

PTO

PERFORMANCE

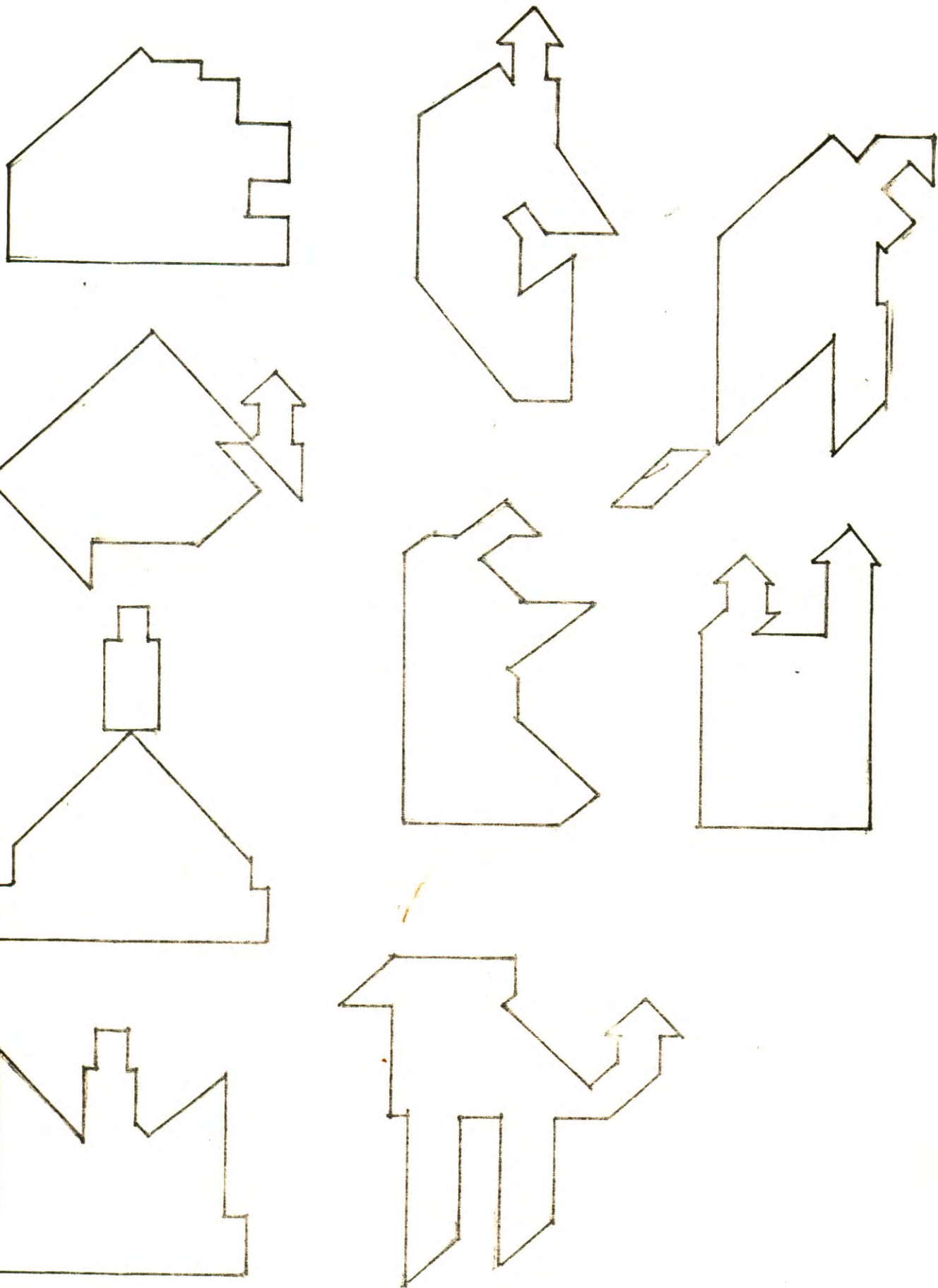
1. Making the square:

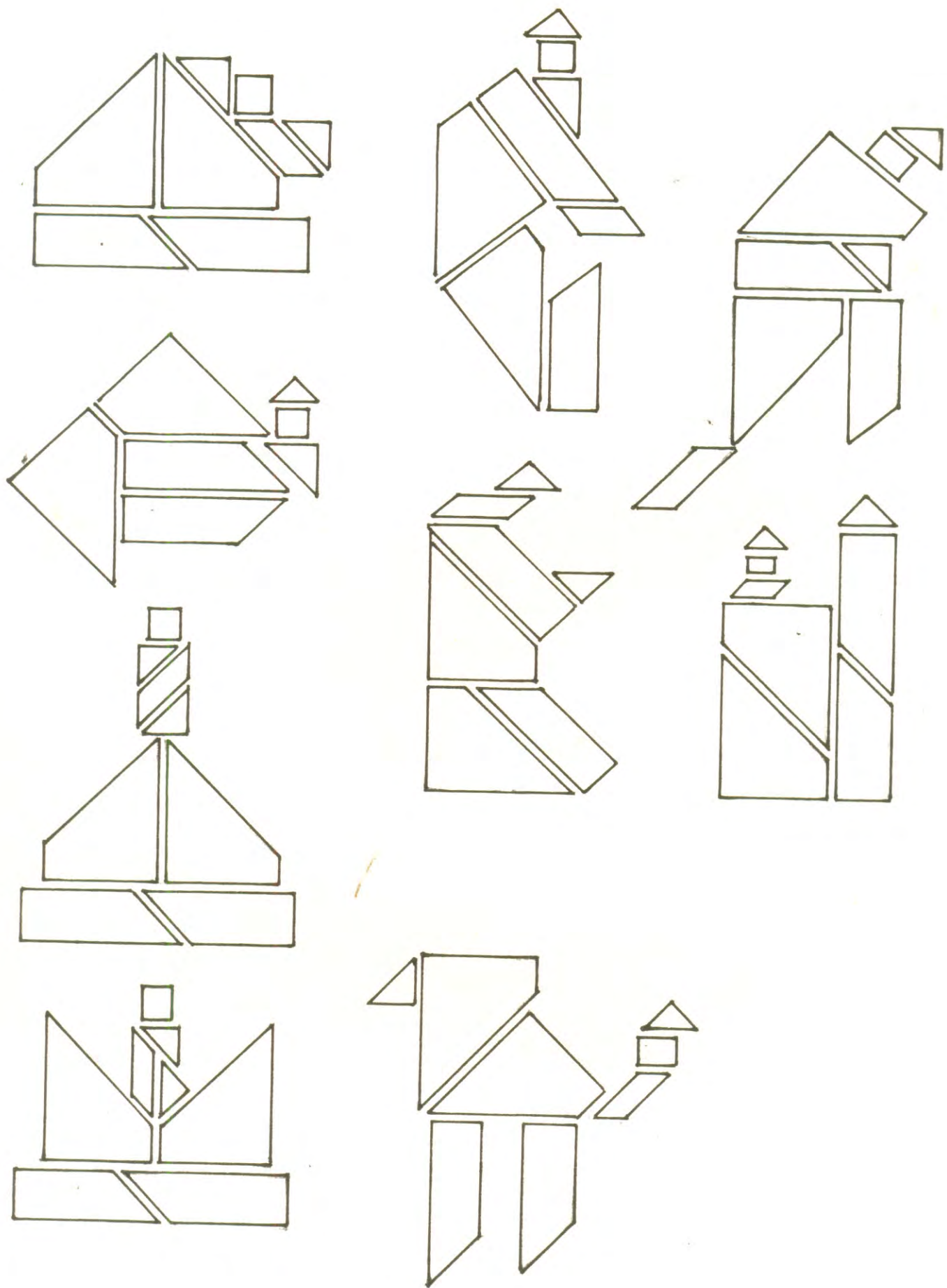
<u>Time</u>	<u>Standard</u>
30 seconds	Excellent
45 seconds	Very Good
60 seconds	Good
75 seconds	Fair
90 seconds	Poor, try again

2. Making the Graphics:

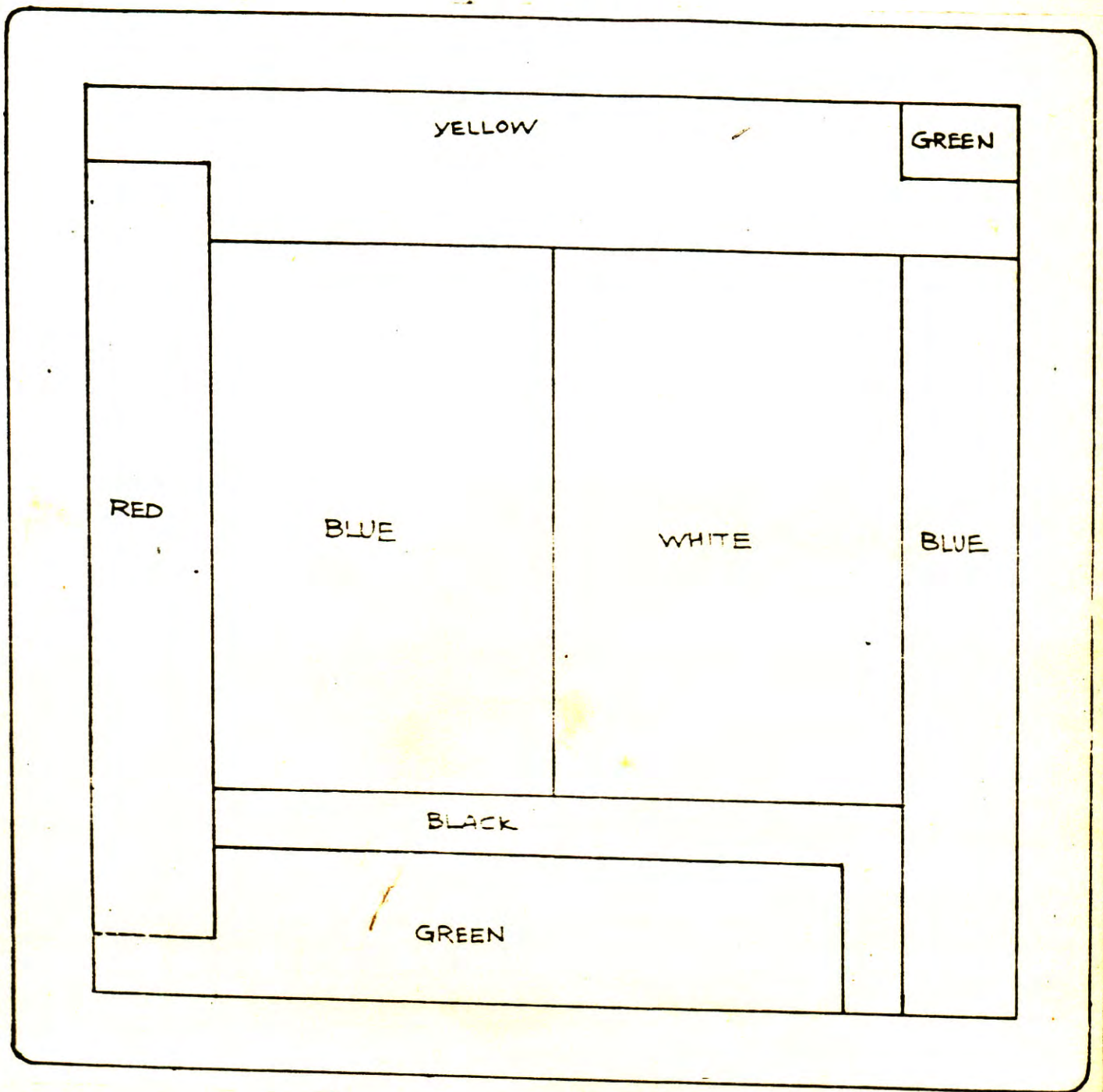
<u>Patterns completed in 30 seconds</u>	<u>Standard</u>
25-32	Excellent
20-25	Very Good
15-20	Good
10-15	Fair
Below 10	Poor; try again

NOTE: In case of difficulty in making the graphics, see the solution on the reverse of the attached sheet.





FIVE COLOUR SQUARE

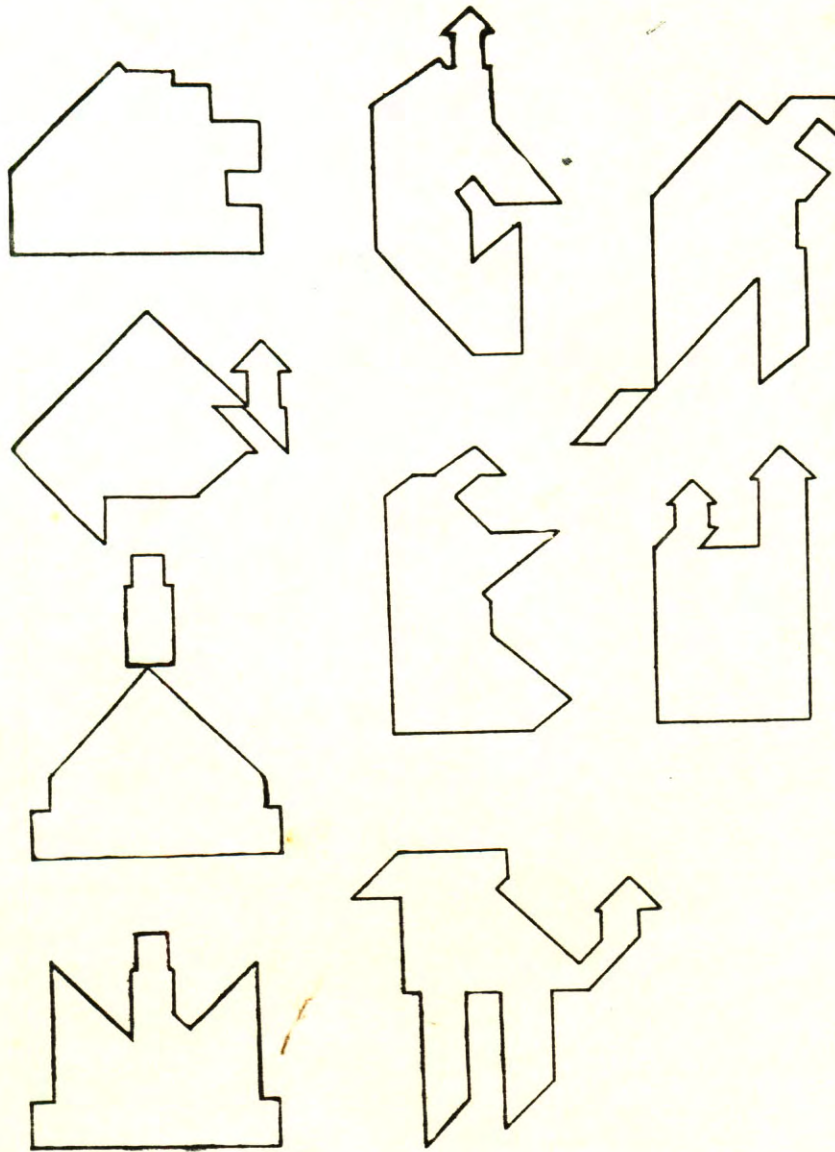


This is a passtime of logic. A square has to be constructed out of the given rectangular pieces of different colours.

NOTE:

While making the squares, no two same colour strips should join each other.

GRAPHIC-O-LOGIC



It is a game of imagination. Many interesting graphics can be made by joining the pieces cut out of a square.

EXERCISE

1. Join the pieces to make the square.
2. Join the pieces and make 32 graphics made on the sheet.

MAXIMUM TIME ALLOWED TO MAKE THE PATTERN IS 30 MINUTES. IN CASE OF DIFFICULTY, SEE THE SOLUTION ON THE REVERSE.

