

SMILE WORKCARDS

Logic and Sets Pack Two

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Smile 1848

Three by Three

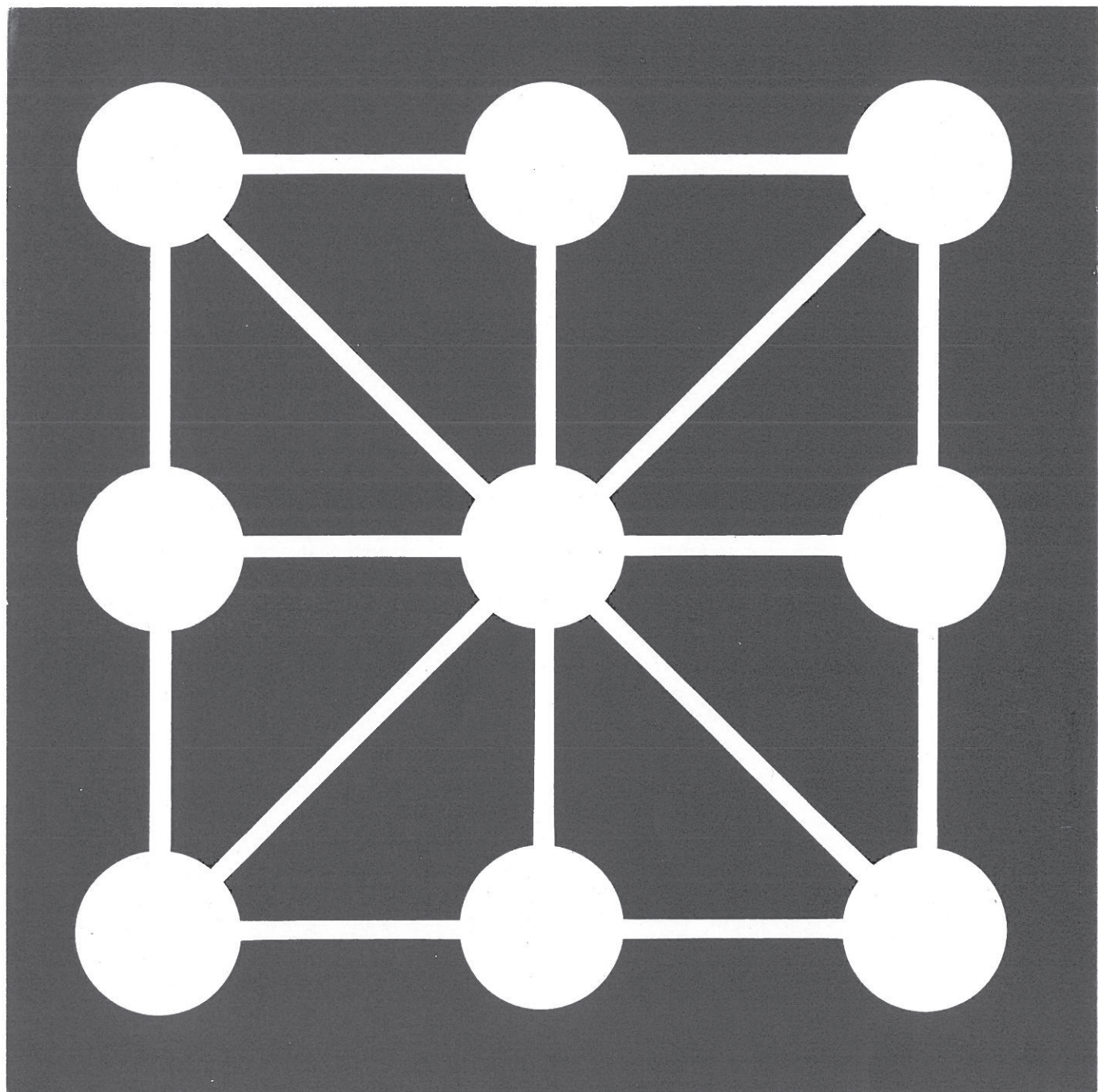
This is a game for two players.

**One player has 3 blue counters
and the other has 3 red counters.**

**Put the counters on the board
one at a time in turn.**

Try to get your 3 in a line.

Take turns to move your counter along a line to
the next space until somebody gets 3 in a line.



All Change

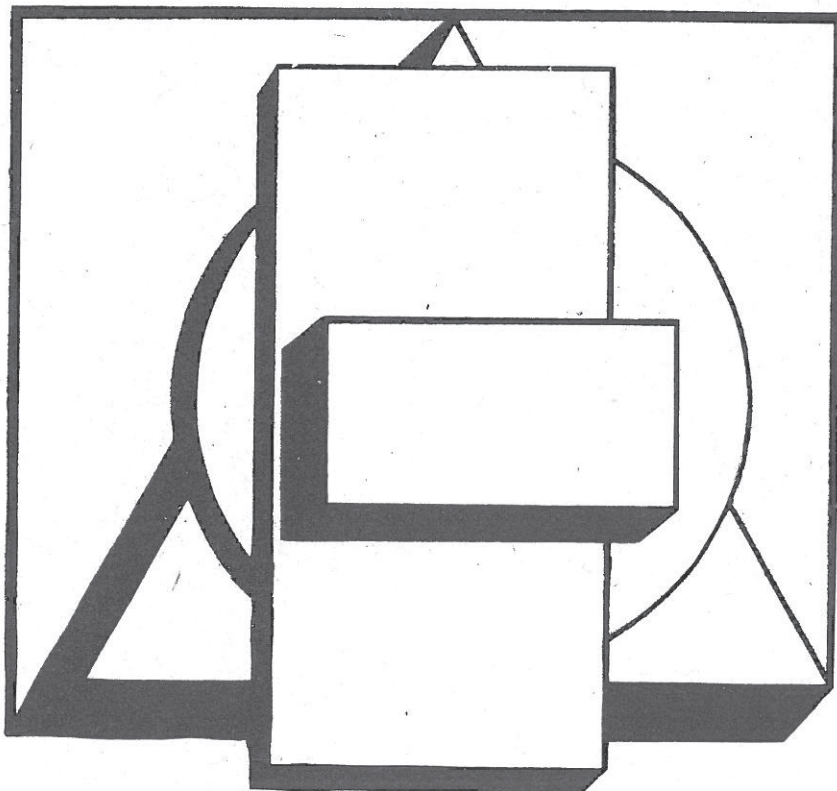
Smile 0475

You will need a set of logiblocs and the sixteen cards from 0475A and 0475B

This is a game for 2 or more.

How to Play

- (1) Shuffle the cards and deal them all **face down**.
- (2) Place a red triangle on the table.
- (3) The first player takes the top card from his pile and places it face up in the centre. He must change the triangle by the instruction on his card.
- (4) Each player continues in the same way. If a player makes a mistake in obeying his card the others may **challenge** and he must add all the cards on the table to the bottom of his own pile.
If the challenger is wrong, he picks up the pile.
- (5) The winner is the first player to use all his cards.



**No
Change**

**Change
shape**

**Change
thickness**

**Change
shape
thickness**

Smile **0475A**
Cut out these eight cards
and use them with
the cards from **0475B**
to play All Change.

Smile **0475B**
Cut out these eight cards
and use them with
the cards from **0475A**
to play All Change.

**Change
size**

**Change
colour**

**Change
size
thickness**

**Change
colour
thickness**

**Change
shape
size**

**Change
shape
size
thickness**

**Change
size
colour**

**Change
shape
size
colour**

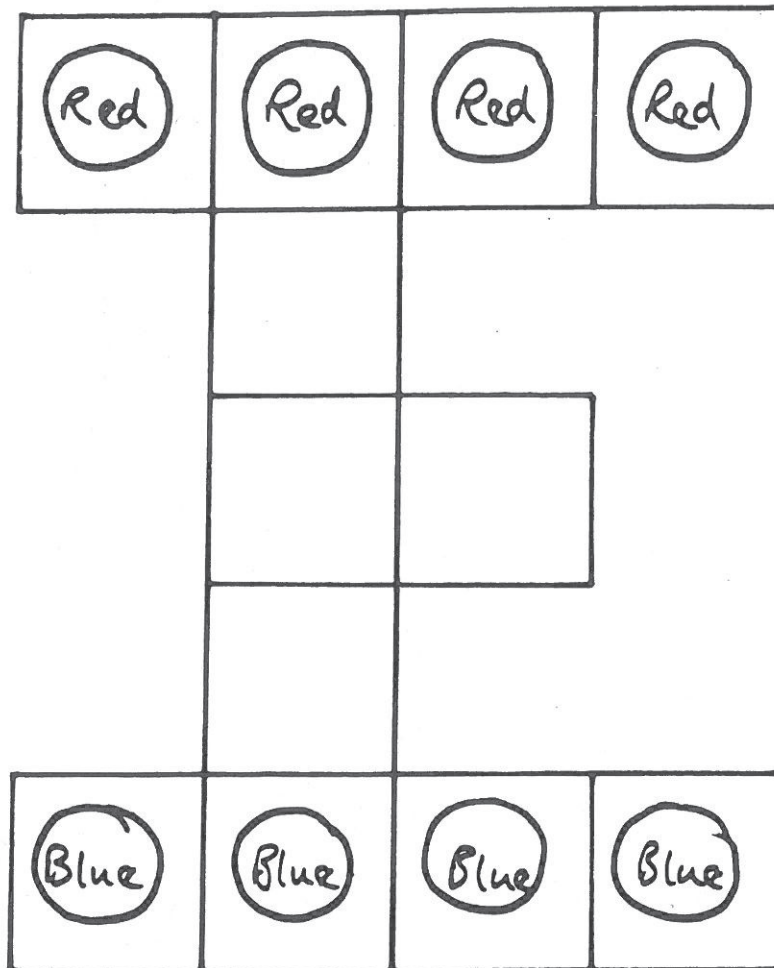
**Change
size
colour
thickness**

**Change
shape
size
colour
thickness**

**Change
shape
colour
thickness**

You will need: 4 red counters 4 blue counters

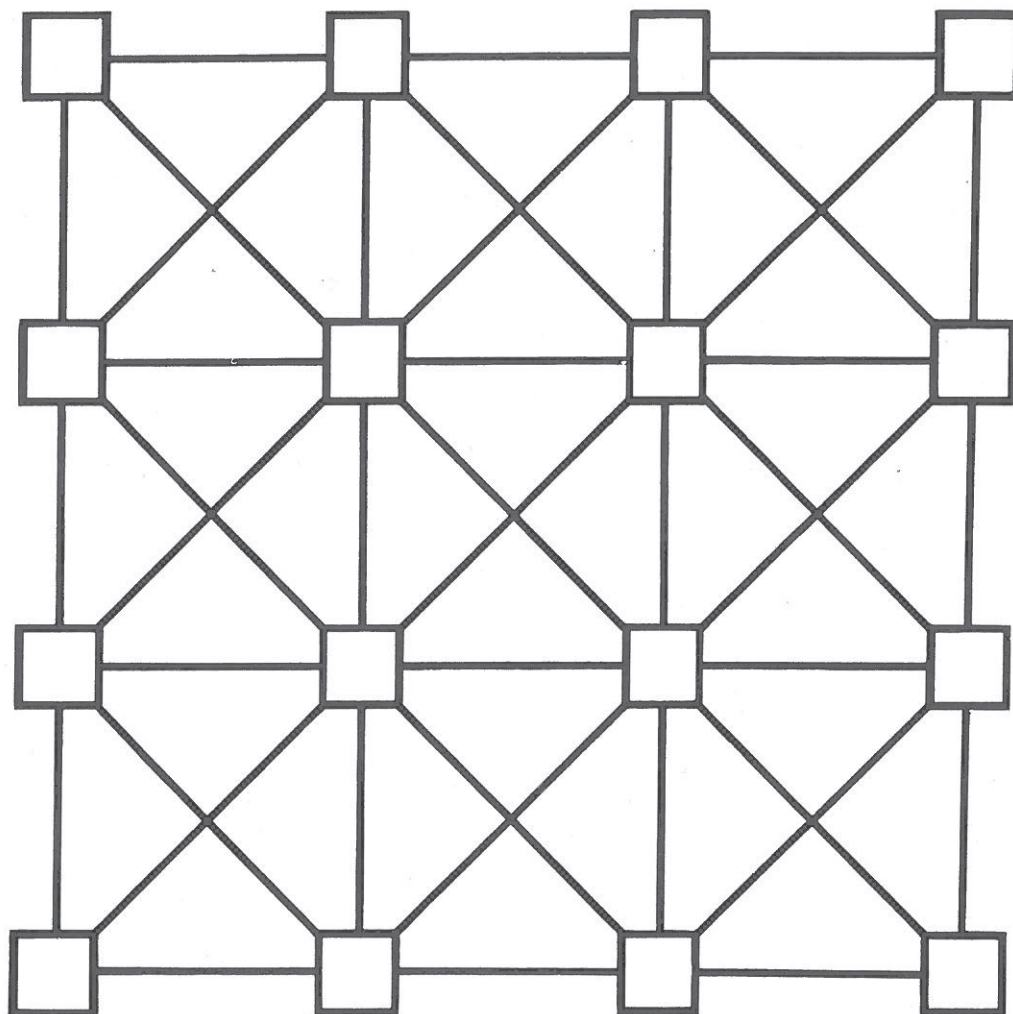
Peg Puzzle



- (1) A puzzle for one person.
- (2) Put the counters on the squares as marked.
- (3) The object is to exchange the positions of the red and blue counters.
- (4) Rules: Any counter can move backwards, forwards or sideways to any square next to it. A counter can move several squares at a time. Diagonal moves are not allowed and jumping over counters is not allowed.

Out of Line

You will need: 4 red and 4 blue counters



Puzzle 1

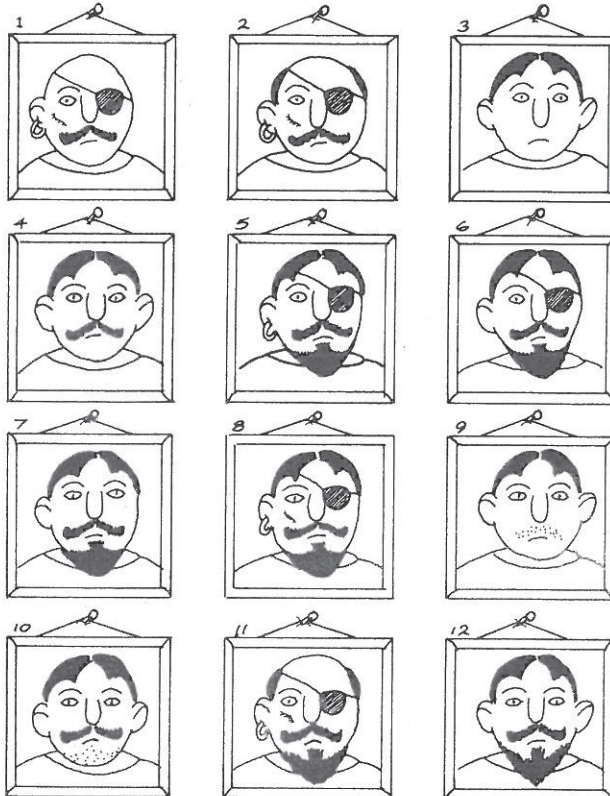
You must put 4 red counters on the square so that no two counters are on the same straight line.

Puzzle 2

Leave the red counters in position and add 4 blue counters so no two blue counters are in the same straight line either.

Draw a sketch to show your answers.

You might like to try All out of Line 0144. This is a similar puzzle but, because it's on a five by five grid, it's much harder.

Self-portrait

Jim was an artist. Each month for one year he painted a picture of himself. He did his first picture in January and when he completed his final picture he was completely bald on top. He cut off his ear in June and lost an eye in July. He started to grow a moustache in February and two months later he started to grow a beard. Sadly his beard fell out in November. In August he had an ear-ring put in. The next month he was involved in a duel and got a scar on his cheek. Can you say which picture was painted in which month?

In this set 'e' may be the odd one out. Why?

K D e A G

Find an odd one out in each set. Say why.

1) 30 70 20 17 50

2) horse rat cow hen pig

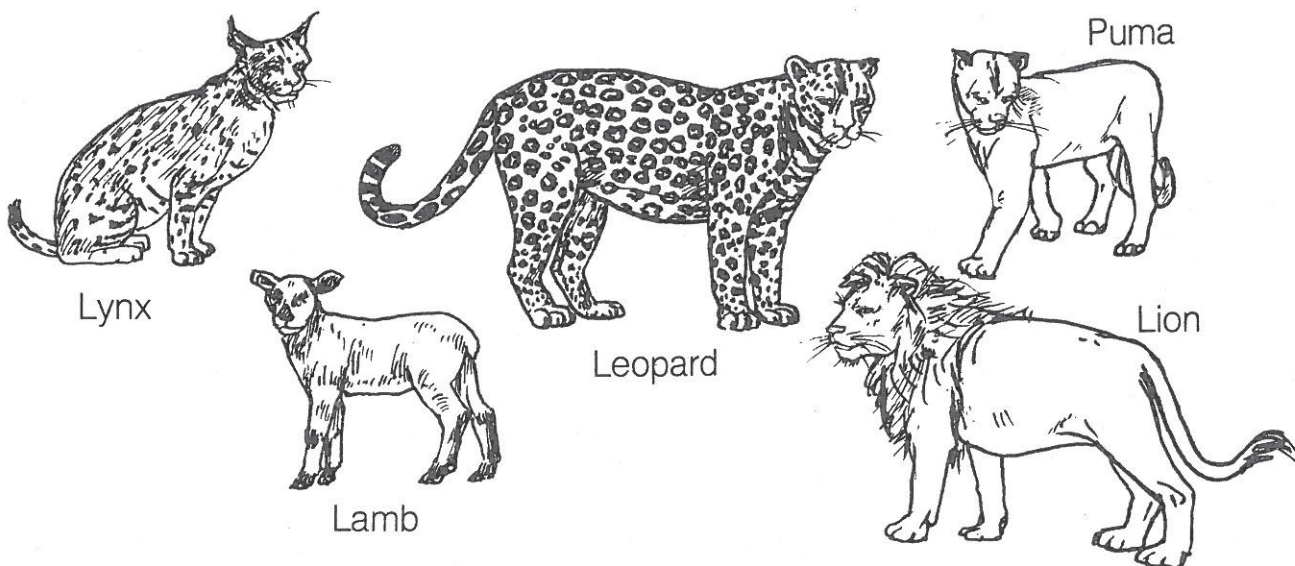
3) 3 2 6 12 4 8

4) potato carrot turnip cabbage

5) 3×8 6×4 2×12 3×7

It is often possible to find several different answers from one set.

For example:



- Lamb - because it is not a meat-eater
- or because it is not a member of the cat family
- Leopard - because it does not have 4 letters
- Puma - because it does not begin with 'L'

Find at least 2 different answers for these sets:

6) orange apple tomato banana

7) 2×1 $12 \div 6$ $4 \div 2$ $16 \div 8$ $15 \div 3$

8) one two four six ten

How many different answers can you find for these sets?

9) $72 \div 2$ $24 \div 4$ $12 \div 2$ $18 \div 3$ $(120 \div 10) \div 2$

10) 6 12 26 60 66 96

11) How many different reasons can you find to make 9 the odd one out?

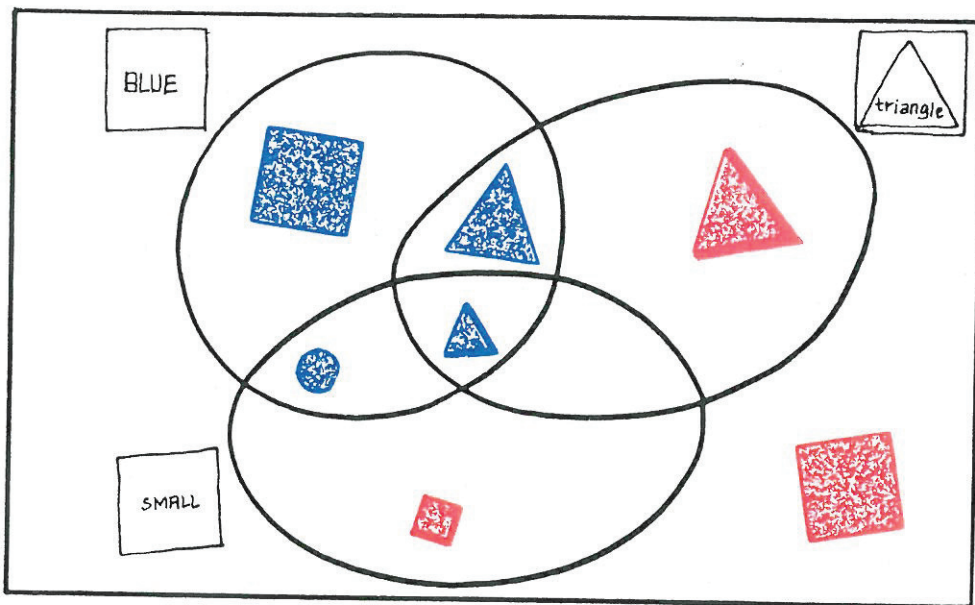
9 24 40 48 64

12) Make up a set of numbers in which 8 is the odd one out.

You will need:
Logicards (0579A), 3 loop set board,
logic blocks, friends

smile
0585

three loops

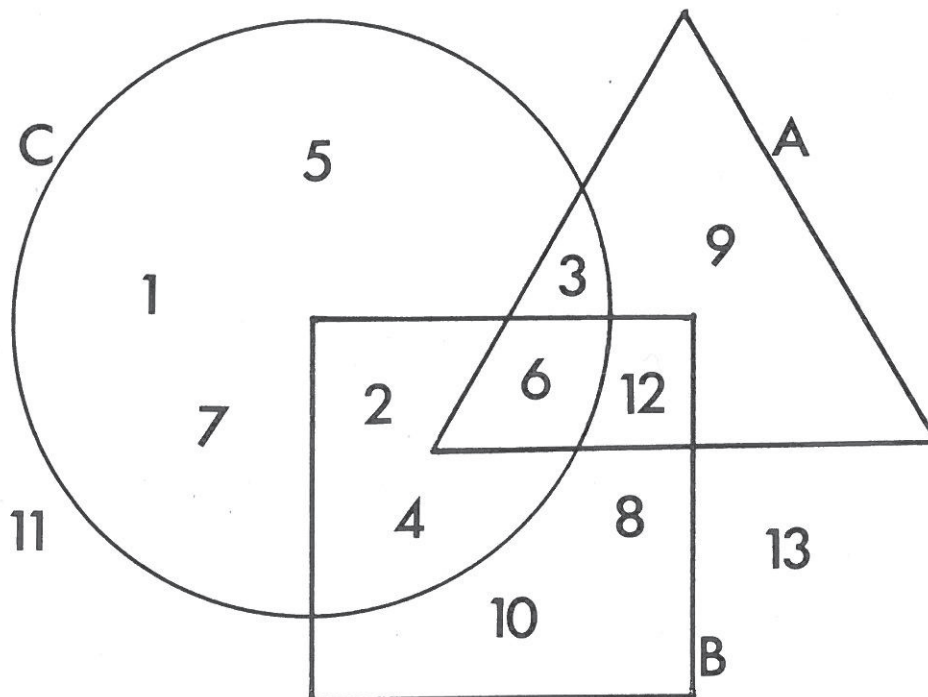


- (1) Share out the blocks.
- (2) Choose a logicard for each loop.
- (3) Take turns to place the blocks in the correct region of the board.
- (4) A player who makes a mistake takes back his block and misses that turn.
- (5) The winner is the first to place all his blocks.

Which Set?

Copy these three shapes: Put the numbers in the correct places.

A is a triangle, B is a square and C is a circle.

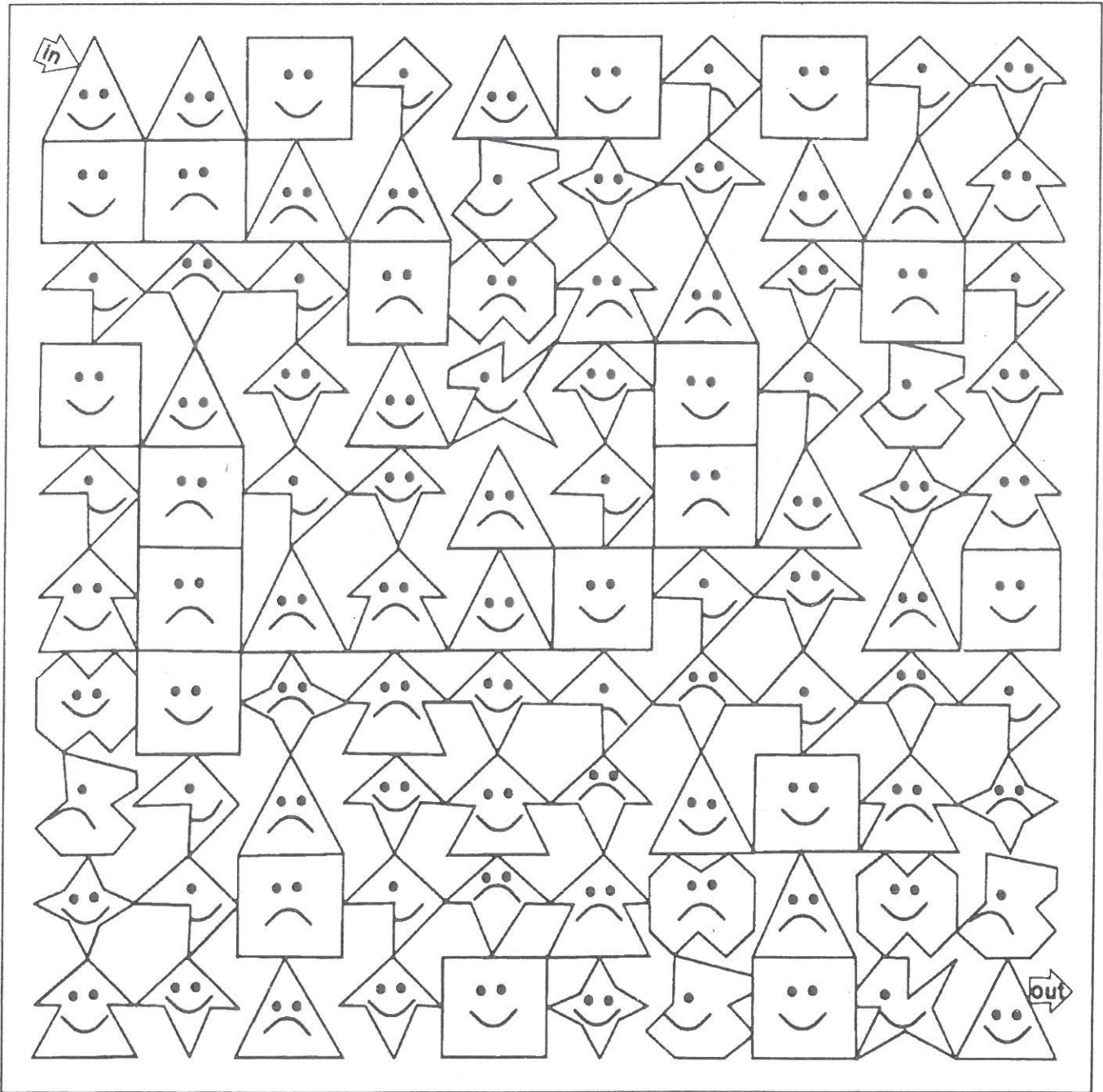


- (1) Which numbers are inside triangle A?
 - (2) Which numbers are inside square B?
 - (3) Which numbers are inside circle C?
-
- (4) Which number is inside A, but is not inside B or C?
 - (5) Which shapes does the number "3" lie inside?
 - (6) Which numbers are not inside triangle A?
 - (7) Which shapes does the number "2" lie inside?
 - (8) In which two shapes can you find both "3" and "6"?
 - (9) Which number is inside all three shapes?
 - (10) Which number is in A and B but not in C?

-
- (11) "11" and "13" are not inside any shape. Can you see why?

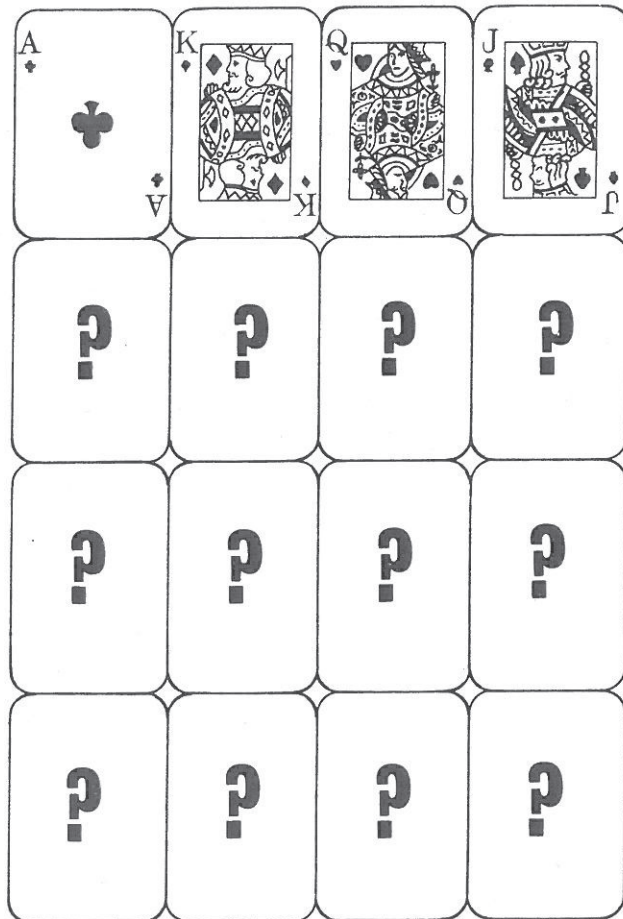
Look carefully at your answers to questions 1, 2 and 3.

3 in 1 Maze



You will need all the Aces, Kings, Queens and Jacks from a pack of cards.

An Honourable Problem



Can you lay out the cards in a block of 4 x 4 so that each row, column and diagonal has 4 different honours? (An honour in cards is an ace or picture card.)