

Indian Puzzle Championship 2011

Online Practice Test - IB

<http://logicmastersindia.com/IPC2011/pot.asp>

Points Table

1	Kakuro	30
2	Fence	15
3	Hitori	15
4	Mastermind	5
5	Minesweeper	20
6	Paint By Number	25
7	Thermometer	10
8	Word Search	30
9	Group Sum Sudoku	25
10	Weights	25
11	Tents	5
12	Battleships	20
13	Simple Loop Finder	20
14	Magnets	30
15	Water Fun	10
Total		285

19-Dec-2010 14:00 IST

60 minutes

Points are generally indicative of the difficulty of the puzzle and time required to solve it. However, your personal experience and preference might differ.

Answer Keys

There is no provision to solve the puzzle online. Each puzzle has one answer key. After solving the puzzle on paper, you have to enter the answer key in the submission site.

Answers keys for each puzzle is explained in the next page.

Kakuro

Enter the digits of top-left to bottom-right diagonal.

Fence

Starting from the top row, enter the number of cells 'outside the loop' in each row.

Hitori

Starting from the top row, enter the number of 'shaded cells' in each row.

Mastermind

Enter the number

Minesweeper

Starting from the top row, enter the number of mines in each row.

Paint-by-Number

Describe the top-left to bottom-right diagonal, 1 for black cell, 0 for white cell.

Thermometer

Describe the top-left to bottom-right diagonal, 1 if filled with mercury, 0 if not.

Word-Search

Enter the missing words, sorted alphabetically, and separated by comma

Group Sum Sudoku

Enter the digits of top-left to bottom-right diagonal.

Weights

Enter the digits in the pans from left to right top to bottom

Tents

Enter the number of tents attached horizontally to trees.

Battleships

Describe the top-left to bottom-right diagonal, 1 if battleship, 0 if no battleship.

Simple Loop Finder

Starting from the top row, enter the number of cells 'outside the loop' in each row.

Magnets

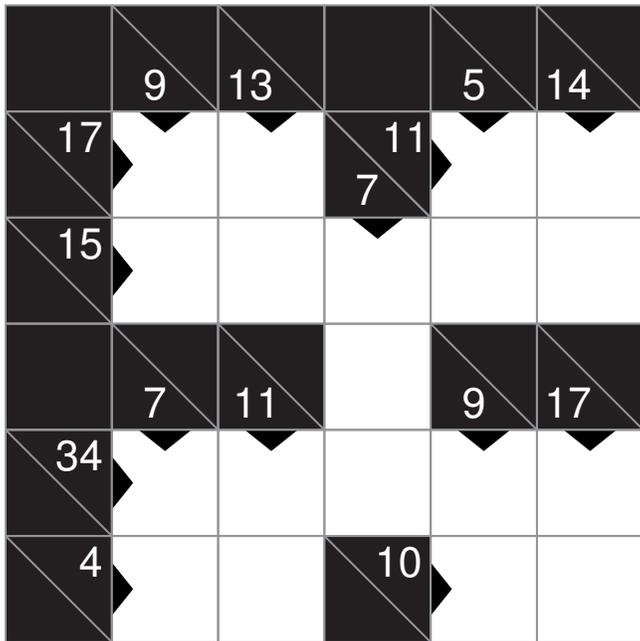
Describe the top-left to bottom-right diagonal, 1 if magnet, 0 if no magnet.

Water Fun

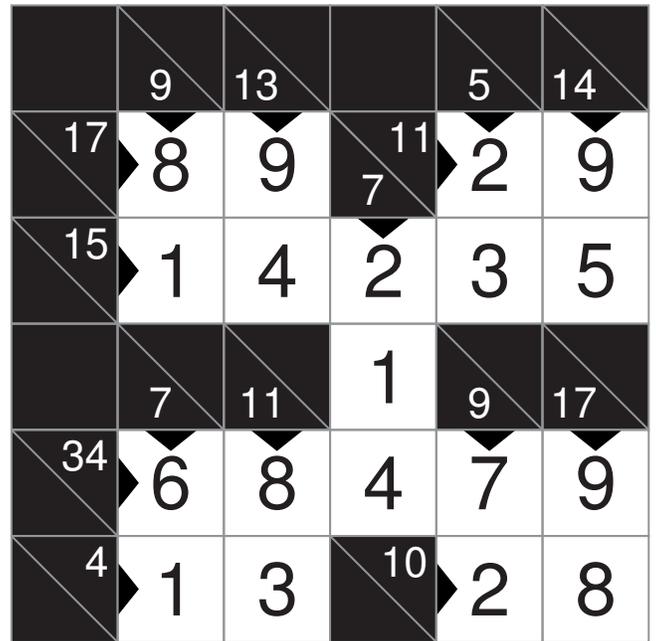
Describe the top-left to bottom-right diagonal, 1 if water, 0 if no water.

Kakuro

Place one digit from 1 to 9 in each empty square so that the sum of the digits in each set of consecutive white squares (horizontal or vertical) is the number appearing to the left of a set or above the set. No number may appear more than once in any set of consecutive white squares.



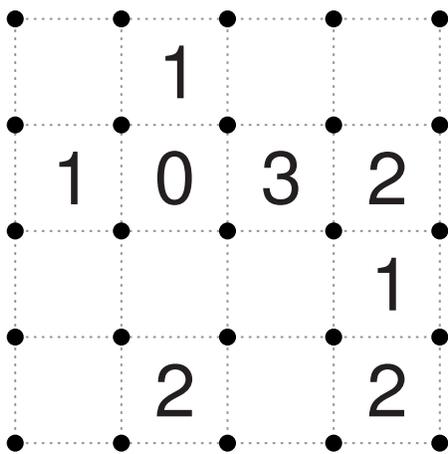
E
X
A
M
P
L
E



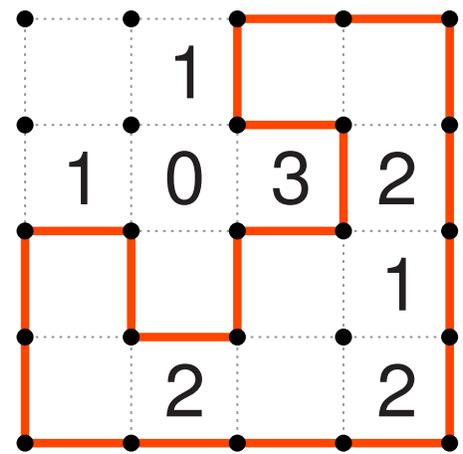
Answer Key: Enter the digits of top-left to bottom-right diagonal. (e.g. 84178)

Fence

Draw a single continuous loop along the dotted vertical or horizontal line segments. Crossovers or branches are not allowed. Digits given inside the cell indicate the count of line segments surrounding that cell.



E
X
A
M
P
L
E



Answer Key: Starting from the top row, enter the number of cells 'outside the loop' in each row (e.g. 2310)

Hitori

Black out some of the digits in the grid so that each row and each column contains distinct digits. Black cells must not touch each other horizontally or vertically. It must be possible to visit any white cell from another white cell using horizontal or vertical paths.

4	5	9	3	2
1	9	9	2	2
7	2	9	1	4
7	3	2	5	3
2	1	5	4	5

E
X
A
M
P
L
E

4	5	9	3	2
1	9	9	2	2
7	2	9	1	4
7	3	2	5	3
2	1	5	4	5

Answer Key: Starting from the top row, enter the number of 'shaded cells' in each row (e.g. 12121)

Mastermind

Find out the correct series of numbers with the help of the information given by the black and white markers. Black markers indicate correct numbers in the right position, while the white ones mark correct numbers in the wrong place. Each number can occur only once in the solution and digit '0' is not used.

9	8	1	3	●	●		
4	5	6	7	○			
2	8	9	5	●	●	○	
<hr/>				●	●	●	●

E
X
A
M
P
L
E

9	8	1	3	●	●						
4	5	6	7	○							
2	8	9	5	●	●	○					
<hr/>				2	8	5	3	●	●	●	●

Answer Key: Enter the number (e.g. 2853)

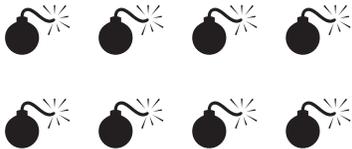
Minesweeper

Place the given number of mines into empty cells in the grid such that the numbers in the grid represent the number of mines in the neighboring cells, including diagonal ones.

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

E
X
A
M
P
L
E

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



Answer Key: Starting from the top row, enter the number of mines in each row (e.g. 22031)

Paint-By-Number

Blacken some of the cells to find out the hidden figure. The numbers on the sides of the grid give the number of black cells in each black stretch in a certain row or column. The black regions are separated by one or more empty cells.

	1			
	1	2	4	1
4				
2				
1	1			
1				

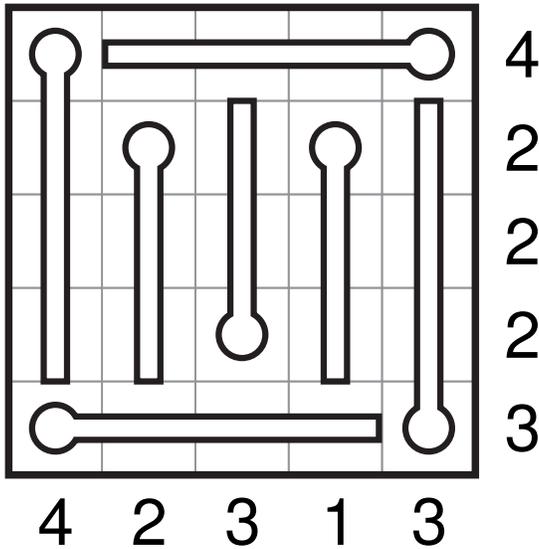
E
X
A
M
P
L
E

	1			
	1	2	4	1
4				
2				
1				
1				

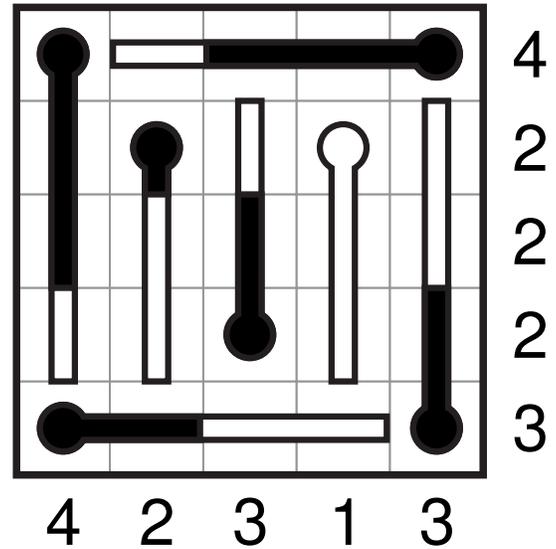
Answer Key: Describe the top-left to bottom-right diagonal, 1 for black cell, 0 for white cell (e.g. 1110)

Thermometer

The thermometers in the grid all have their own level of mercury, which always flows from rounded end towards the other end. Thermometers may be empty, partially or completely full. Numbers around the grid indicate the numbers of cells in the corresponding row / column that contain mercury.



E
X
A
M
P
L
E



Describe the top-left to bottom-right diagonal, 1 if filled with mercury, 0 if not (e.g. 11101)

Word-Search

5 of the 8 words in the list have been placed in the grid. Find the words in the list which have not been placed in the grid.

S	H	V	J	R	M
T	A	I	G	I	A
N	S	S	E	R	S
E	H	T	R	A	Y
T	I	O	M	K	U
L	W	V	G	A	W

E
X
A
M
P
L
E

S	H	V	J	R	M
T	A	I	G	I	A
N	S	S	E	R	S
E	H	T	R	A	Y
T	I	O	M	K	U
L	W	V	G	A	W

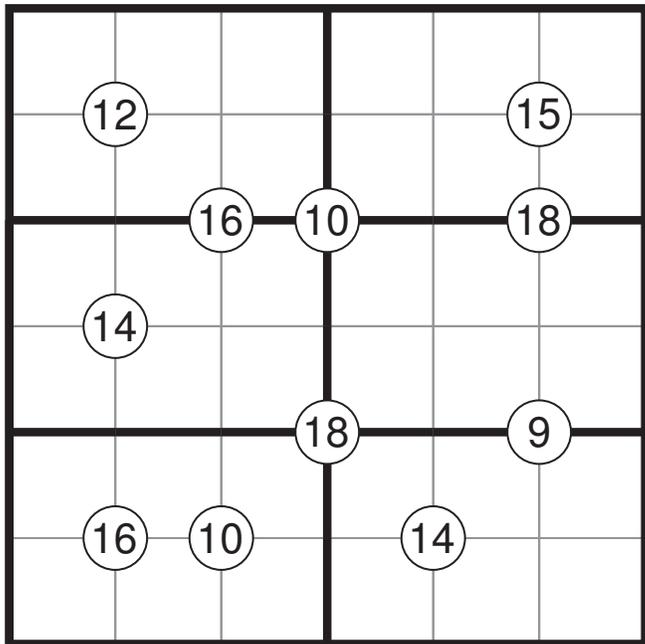
AKARI
ARROW
HASHI
MASYU
SNAIL
SNAKE
TENTS
VISTA

Missing Words
SNAIL
SNAKE
VISTA

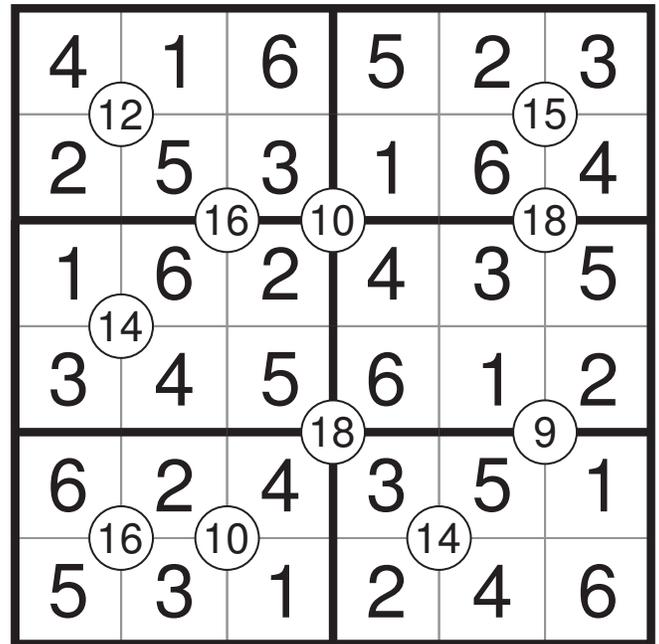
Answer Key: Enter the missing words, sorted alphabetically, and separated by comma (e.g. SNAIL, SNAKE, VISTA)

Group Sum Sudoku

Fill in the grid such that every row, every column and every 2x3 box contains the numbers 1 to 6. The number in the circle represents the sum of the digits surrounding it.



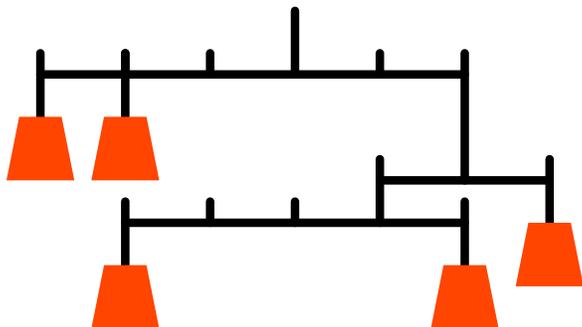
EXAMPLE



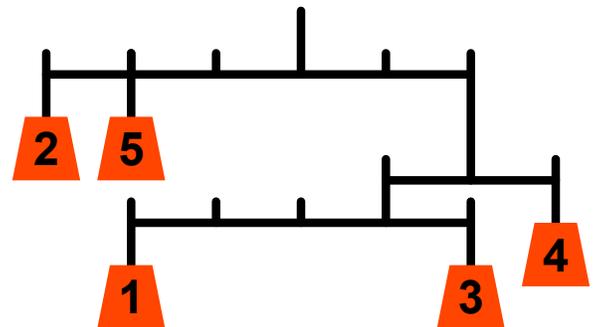
Answer Key: Enter the digits of top-left to bottom-right diagonal. (e.g. 452565)

Weights

Assign digits from 1 to n to each weight, where n is the number of weights. The horizontal rod indicates that there is equal torque on both sides. The torque of each weight is its weight times its distance from fulcrum. Assume that the strings and rods have negligible weight.



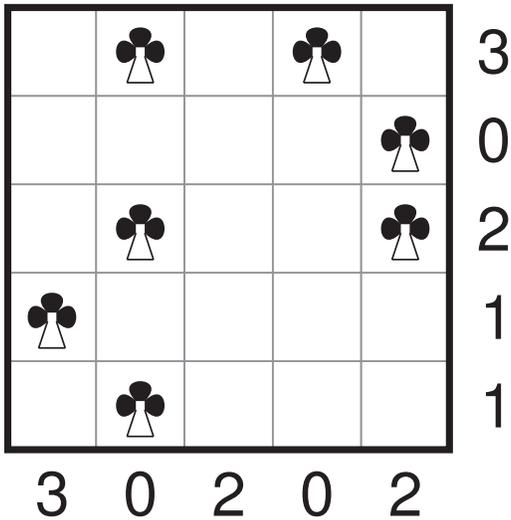
EXAMPLE



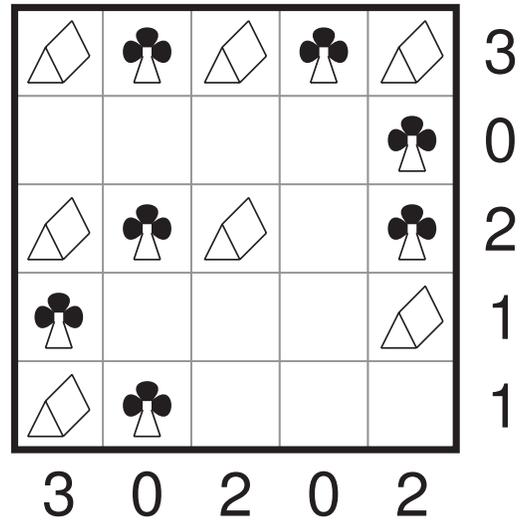
Answer Key : Enter the digits in the pans from left to right top to bottom (e.g. 25134)

Tents

Place one tent horizontally or vertically next to each tree. Tents do not touch each other, not even diagonally. The numbers outside the grid indicate the number of tents in that row or column.



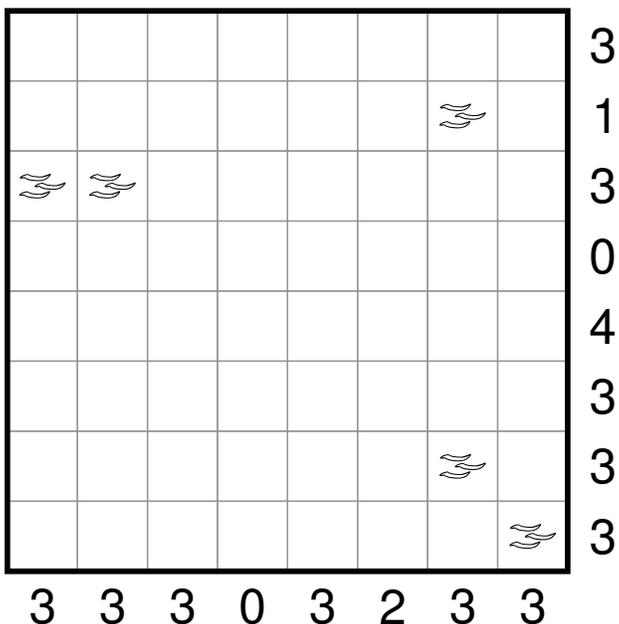
EXAMPLE



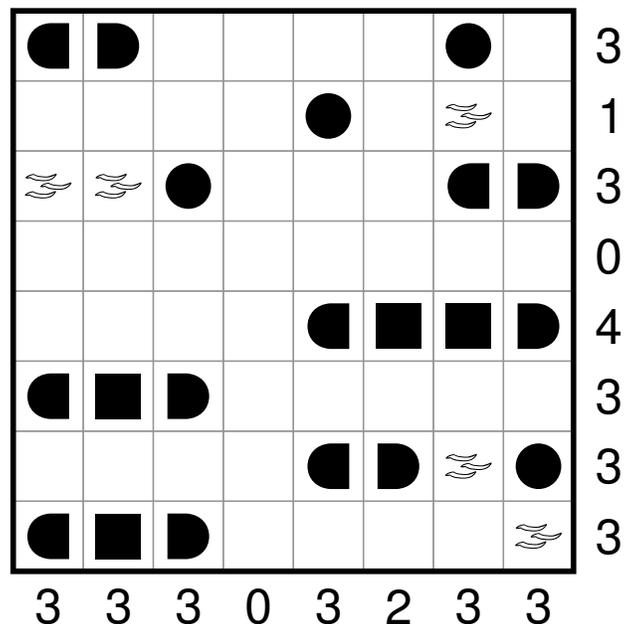
Answer Key: Enter the number of tents attached horizontally to trees. (e.g. 4)

Battleships

Locate the position of the 10-ship fleet in the grid. The shapes of the ships are shown. There is one 4x1 battleship, two 3x1 cruisers, three 2x1 destroyers and four 1x1 submarines. The numbers beside the grid indicate the number of cells occupied by ships in each row, while the numbers below the grid indicate the number of occupied cells in each column. Ships cannot touch each other, not even diagonally. Some cells are known to be water and are indicated by waves.



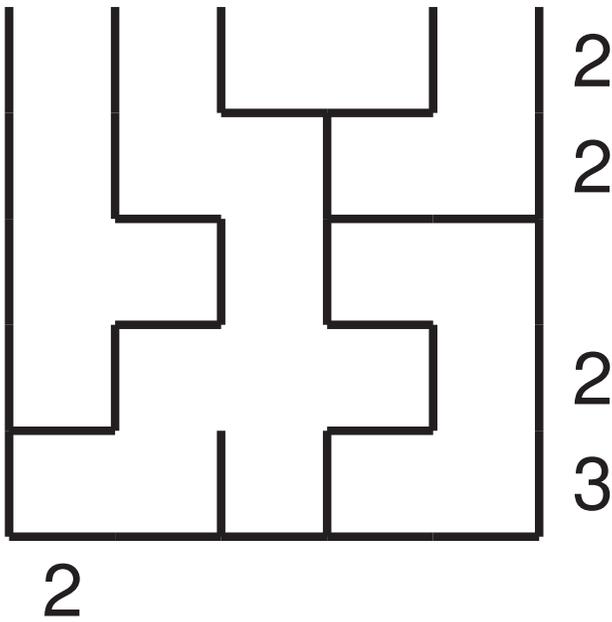
EXAMPLE



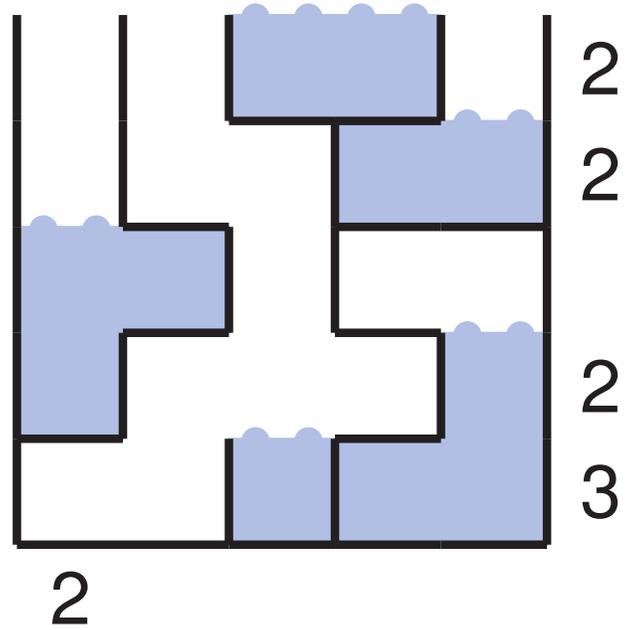
Answer Key: Describe the top-left to bottom-right diagonal, 1 if battleship, 0 if no battleship (e.g. 101010000)

Water Fun

Fill water in some parts of the grid. The numbers below or next to the grid indicate how many squares of each row or column must be filled with water. Connected areas of filled cells must have same surface height everywhere – even if the surface is not connected, like in a U-shaped tube.



E
X
A
M
P
L
E



Answer Key: Describe the top-left to bottom-right diagonal, 1 if water, 0 if no water (e.g. 00001)

Notes about the Puzzles

- The existing digits or letters can't be removed or erased.
- All the puzzles in this competition will have exactly one solution.
- Guess work is not needed to solve any puzzle in this competition. We strongly advise you not to guess any digit or letter.