MOCK TEST 16
March 14, 2010

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INSTRUCTION BOOKLET

Sudoku	Points
Battleship Sudoku	105
Skyscraper Sudoku	50
Sudokuro	140
Minesweeper Sudoku	95
Domino Sudoku	45
Easy as Sudoku	60
Mastermind Sudoku	70
Word Search Sudoku	110
Kropki Sudoku	30
Classic Sudoku	75
Digital Paint by Number sudoku	150
Pirate Sudoku	70
Total	**1000 + TB (90 min)**

Mock will be open for a period of 24 hrs
(20:00 IST 13th March -20:00 IST 14th March

The Instruction Booklet also contains an Appendix (last 5 pages). This is only for participants who are new to logic puzzles apart from sudoku. It is only to help you solve the sudoku variants and they will not appear in the mock test.

(www.logicmastersindia.com)

Mastermind Sudoku

Fill in the grid with digits from 1 to 9 so that each row, column and 3x3-box has exactly one of each digit. The black and white markers to the right of the grid correspond to the 5 marked cells in that row and the code given below the grid. Black markers indicate correct numbers in the right position in the 5 digits and the code, while the white ones mark correct numbers in the code in the wrong place among the 5 digits.

1	2	3	4	5	6	7	8	9	Markers
						2	4	8	○○
3	4						9	5	●●●●
9	8	5							●○○
						5	1	3	○○○○
5	7						6	2	●○○
1	2	9							●○○
						6	8	9	●●●●
8	5						2	7	○○
7	9	6							●●○○

Minesweeper Sudoku

Fill in the grid with digits from 1 to 6 so that each row, column and 3x3-box has exactly one of each digit and 3 mines. Every cell containing a digit that matches the total number of mines which can be found in the horizontally, vertically and diagonally neighboring cells is painted grey.

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

# Pirate Sudoku

Fill in the grid with digits from 1 to 9 so that each row, column and 3x3-box has exactly one of each digit. The 5's represent treasure chests and are completely surrounded by (horizontally and vertically only) pirates (1, 2, 3 and 4). The commoners (6, 7, 8 and 9) cannot be found next to a treasure chest (5).

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

Classic Sudoku

Fill in the grid with digits from 1 to 9 so that each row, column and 3x3-box has exactly one of each digit.

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

Kropki Sudoku

Fill the grid with the digits 1 to 9 so that each row, column and 3x3-box has exactly one of each digit. If the difference between two cells is 1 then there is a white dot. If digit in a cell is the half from a neighboring cell then there is a black dot. The dot between two cells with 1 and 2 can have any of these two colors.
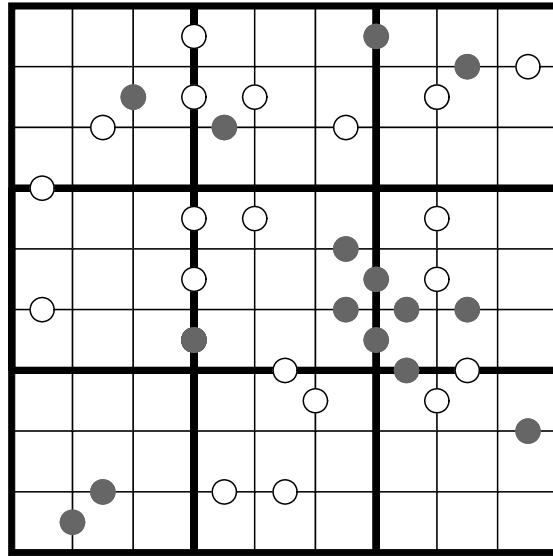
Domino Sudoku

Fill the grid with digits 1 to 6, so that each digit appears in each row, each column and each 2X3 box. The sudoku solution will contain one each of the fifteen 2X1 tiles and the sic single tiles placed in the grid. The dominos can be rotated in any direction regardless of the orientation of the numebers.
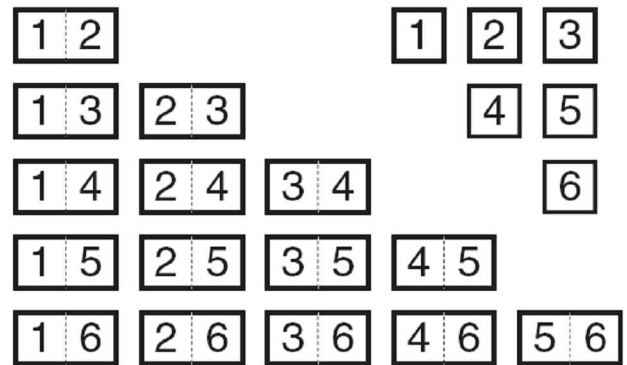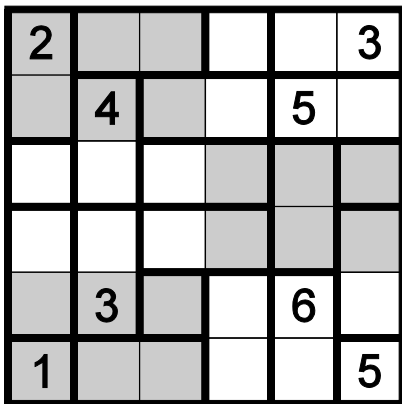
Sudokuro

Fill the grid with digits 1 to 9, so that each digit appears in each row, each column, or the 11 outlined regions. The numbers outside and inside the grid set the sums in horizontal or vertical columns. The number appearing to the left of a set or above the set, so that the sum of the digits in each set of consecutive white boxes(horizontal or vertical).

Skyscraper Sudoku

Fill in the grid such that every row, every column and every 3X3 box contains the numbers 1 to 9. The numbers in the grid represent the height of the skyscraper in that cell. The numbers outside the grid represent the number of skyscrapers which can be seen in the corresponding row or column in the given direction.

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

Battleship Sudoku

Fill the grid also that every row, every column and every 3x3 box contain the digits 1 through 9. To solve the sudoku you will need to locate the position of the 10-ship fleet in the grid. The ships with size greater then 1 can be placed only in horizontal and vertical directions. The ships do not touch each other, not even diagonally. The numbers outside the grid indicate how many cells in that row or column contain parts of ships. The ship can not occupy the cells with given digits.

Example: http://motris.livejournal.com/79580.html

Easy as Sudoku

Fill the grid with the digits 1 to 6. Each row, column and 3x3-box has exactly one of each digit and 3 empty cells. The clues along the edges tell you which digit you can see from that direction

Example: http://www.sachsentext.de/en/endview_sudoku1.htm

Digital Paint by Number Sudoku

Fill in the grid with digits from 1 to 9 so that each row, column and 3x3-box has exactly one of each digit. You also need to shade a few cells within the grid to find out a hidden figure. The numbers on the sides of the grid give the sum of the shaded cells in each shaded stretch in a certain row or column. The black regions are separated by at least one or more empty cells.

Example: http://motris.livejournal.com/23949.html

Word Search Sudoku

Place the alphabets C,D,E,K,M,O,S,T and U in the grid so that every row, every column and every 3 X 3 box contains each alphabet at least once. You should be able to find the words given below the grid. These words can be placed horizontally, vertically, or diagonally - forward or backward.

Example: http://www.sachsentext.de/en/wortsuch_sudoku1.htm

Appendix

The appendix is mainly for participants who are new to logic puzzles apart from sudoku. It is only to help you solve the sudoku variants and they will not appear in the mock test.

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.

```
5 2 1 7 4  ● ○ ○              5 2 1 7 4  ● ○ ○
2 6 8 1 6  ●           E      2 6 8 1 6  ●
6 5 9 2 7  ○ ○ ○      X       6 5 9 2 7  ○ ○ ○
3 4 5 8 1  ○ ○ ○      A       3 4 5 8 1  ○ ○ ○
                     M
9 3 4 6 8  ● ○        P       9 3 4 6 8  ● ○
_____        L       _____
○○○○○  ● ● ● ● ●      E       5 3 7 1 9  ● ● ● ● ●
                                  Solution
```

Minesweeper

Place the 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.

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.

Solution
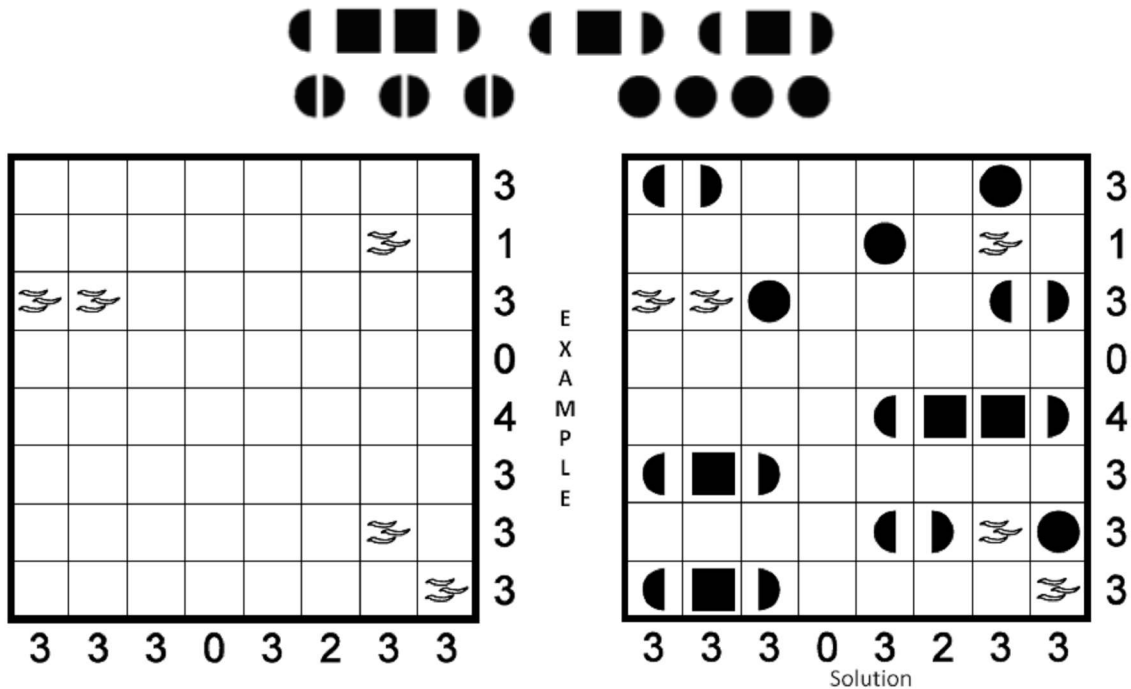
Easy As ABCD

Enter the letters A~C, each letter exactly once, in all rows and columns. One cell will remain empty in each row and column. The letters outside the grid show the letter that is seen first from that direction.

Solution
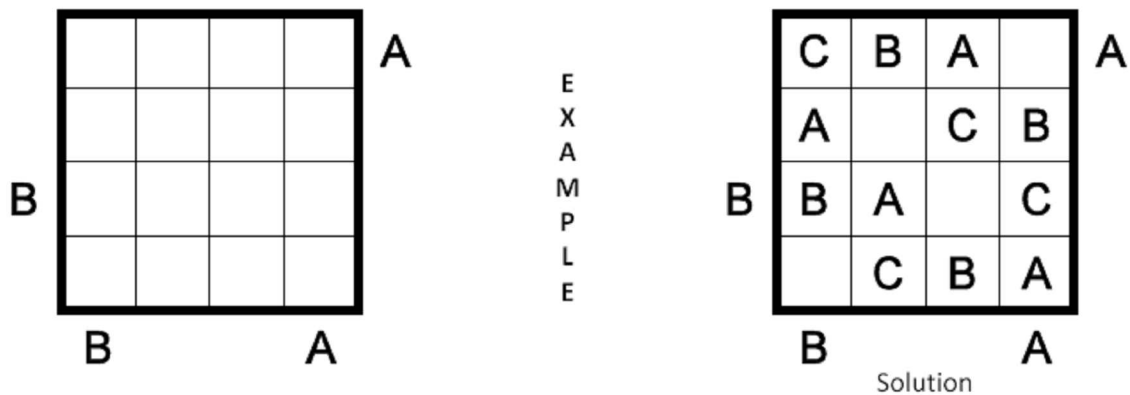
Skyscrapers

The grid represents a plot with skyscrapers of different heights. In each row and column, 1 ~ 6 occur exactly once each. Each digit inside the grid represents the height of the skyscraper in that cell. The digits outside the grid indicate the number of skyscrapers seen from the corresponding direction.

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

EXAMPLE

	2	2	5	5	1	3	
3	4	5	2	1	6	3	2
1	6	1	3	2	4	5	2
2	5	6	4	3	1	2	4
5	2	3	1	4	5	6	1
4	1	2	5	6	3	4	2
3	3	4	6	5	2	1	4
	3	2	1	2	4	3	

Solution

Kakuro

Place one digit from 1 to 9 in each empty box so that the sum of the digits in each set of consecutive white boxes(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 boxes.

EXAMPLE

Solution

Paint-By-Numbers

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.

Column clues (top):

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

Row clues (left):

2	5
1	5
1	1	1
2	1	2
5	1
2	1	3
1	3	3
1	7
2	5

Kropki

Fill the table with digits from 1 to 4 so that each digit appears in every row and column exactly once. If absolute difference between two digits in neighboring cells equals 1 then they're separated by white dot. If digit in the cell is a half of digit in the neighboring cell then they're separated by black dot. The dot between "1" and "2" can have any of these dots .

EXAMPLE
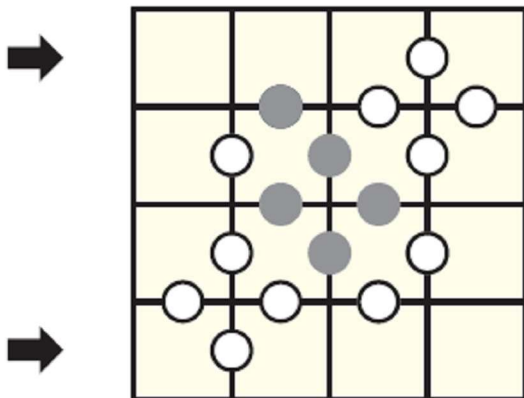
ANSWER

Word Search

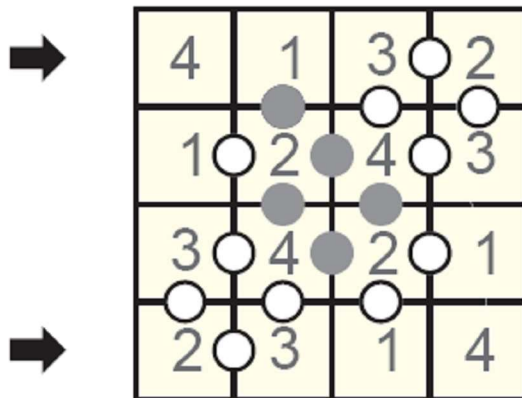18 of the 20 (14 of 16 in the example) words in the list have been placed in the grid. Find the two words in the list which have not been placed in the grid.

T	T	H	O	U	S	E	M	A	I	D	P	A
E	F	N	N	L	C	D	Q	L	B	C	T	U
G	L	O	N	R	M	U	V	D	K	I	N	R
A	H	I	G	O	D	C	F	N	C	T	P	I
R	E	T	B	D	I	A	L	O	G	U	E	F
U	Q	A	N	O	I	T	A	U	C	A	V	E
O	U	R	T	Y	M	I	U	S	X	N	R	R
C	A	U	H	R	S	O	T	A	B	O	P	O
S	T	S	S	T	N	T	D	C	R	Y	U	
I	I	N	O	I	T	A	L	U	G	E	R	S
D	O	E	J	K	S	P	R	N	A	A	R	D
H	N	M	S	U	O	I	R	A	C	E	R	P
A	U	T	H	O	R	I	Z	E	M	J	S	S
Z	C	C	N	T	R	V	T	R	L	Z	F	R

T	T	H	O	U	S	E	M	A	I	D	P	A
E	F	N	N	L	C	D	Q	L	B	C	T	U
G	L	O	N	R	M	U	V	D	K	I	N	R
A	H	I	G	O	D	C	F	N	C	T	P	I
R	E	T	B	D	I	A	L	O	G	U	E	F
U	Q	A	N	O	I	T	A	U	C	A	V	E
O	U	R	T	Y	M	I	U	S	X	N	R	R
C	A	U	H	R	S	O	T	A	B	O	P	O
S	T	S	S	T	N	T	D	C	R	Y	U	
I	I	N	O	I	T	A	L	U	G	E	R	S
D	O	E	J	K	S	P	R	N	A	A	R	D
H	N	M	S	U	O	I	R	A	C	E	R	P
A	U	T	H	O	R	I	Z	E	M	J	S	S
Z	C	C	N	T	R	V	T	R	L	Z	F	R

Missing Words AUCTIONED   FAVOURITE

AERONAUTIC	AUTOMOBILE
AUCTIONED	DIALOGUE
AURIFEROUS	DISCOURAGE
AUTHORIZE	EDUCATION
EQUATION	MENSURATION
EVACUATION	PRECARIOUS
FAVOURITE	PRECAUTION
HOUSEMAID	REGULATION

Dominos

The grid contains a set of 28 dominoes, using all combinations of zero through six. The layout is shown with domino edges removed. Reconstruct the missing edges.

2	1	4	6	3	0	2
5	4	0	5	5	3	4
5	2	0	3	6	5	6
0	2	0	1	6	6	2
	3	1	6	5	3	6	1
	3	4	5	1	6	0	4
	4	4	5	1	0	2	4
	2	3	1	0	2	1	3

2	1	4	6	3	0	2
5	4	0	5	5	3	4
5	2	0	3	6	5	6
0	2	0	1	6	6	2
3	1	6	5	3	6	1
3	4	5	1	6	0	4
4	4	5	1	0	2	4
2	3	1	0	2	1	3

0	0	1	4	3	5
0	1	1	5	3	6
0	2	1	6	4	4
0	3	2	2	4	5
0	4	2	3	4	6
0	5	2	4	5	5
0	6	2	5	5	6
1	1	2	6	6	6
1	2	3	3		
1	3	3	4		