

NAME:

POINTS:



# 8<sup>TH</sup> 24 HOURS PUZZLE CHAMPIONSHIP

17-18 NOVEMBER 2007

HOTEL BENTA

BUDAPEST

PUZZLES BY (UNLESS STATED OTHERWISE):

INTERNATIONAL CHESS GRANDMASTER

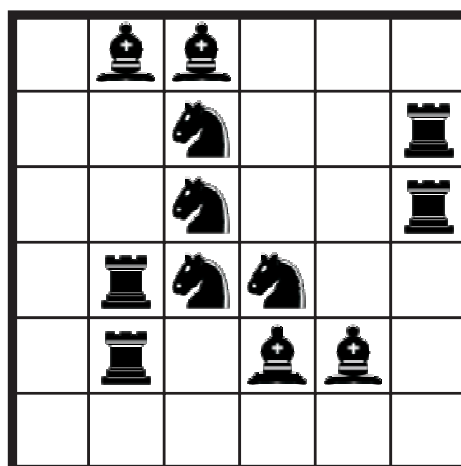
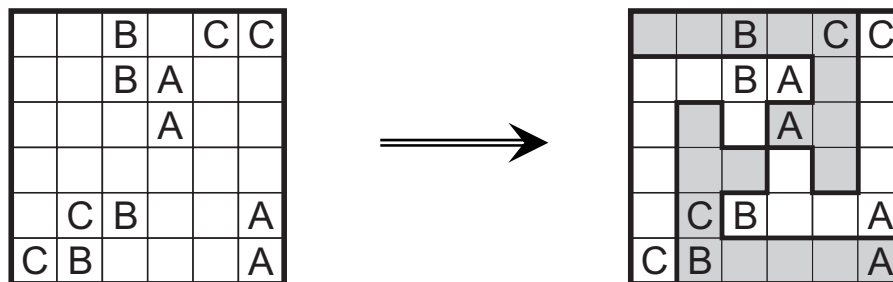
**ZOLTÁN GYIMESI**

Dissection	10 points
Coral Finder	30 points
SAKK Diagonal Side View	45 points (15+30)
SAKK Snail with Side View	65 points (25+40)
Queens' (and Knights') Park	75 points (25+25+25)
Chess Battleships	80 points (30+50)
Knights' Battle	120 points (30+40+50)
Dotted Pentomino	120 points (40+40+40)
Password Path	150 points (30+30+90)
Grandmaster Valuation	150 points
Chess Tournament	155 points (25+40+90)
<hr/>	
<b>Total</b>	<b>1000 points</b>

## DISSECTION (10 POINTS)

Divide the given shape into several congruent parts so that each part contains each figure exactly once. Division lines are only allowed to follow the horizontal and vertical grid lines. Parts may be rotated but not reflected relative to each other.

Example:



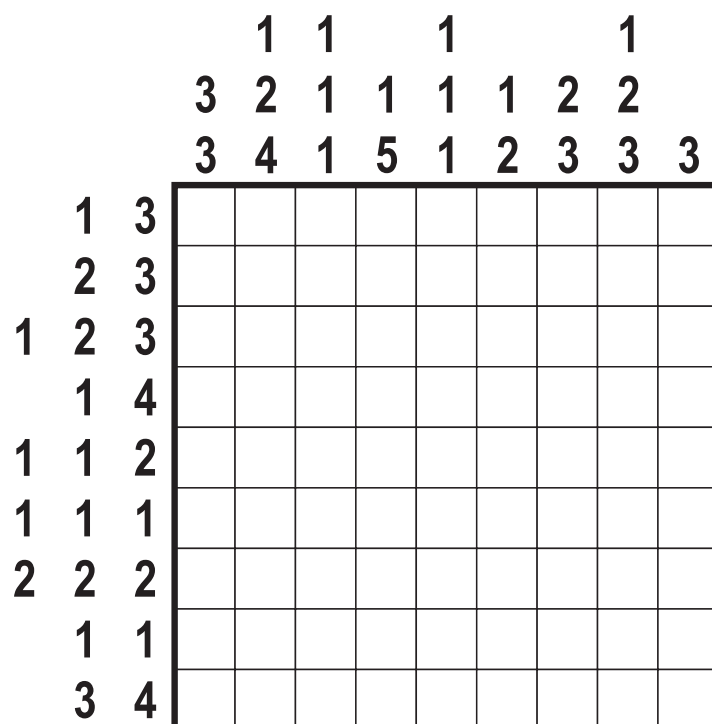
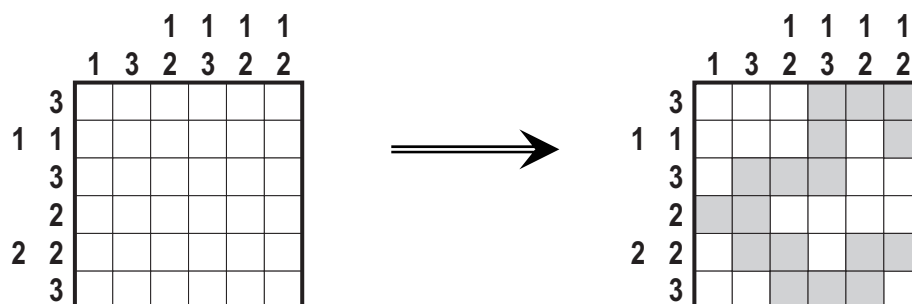
10 POINTS

PUZZLE BY ZOLTÁN NÉMETH

## CORAL FINDER (30 POINTS)

Select a connected set of squares – the coral – so that it does not touch itself, not even diagonally. Numbers outside the grid indicate the lengths of consecutive parts of the coral in the given row or column (similary as in the "Paint it black" puzzles). However, numbers belonging to the same row or column are in increasing order and not in the order they appear. No 2x2 area may be covered by the coral.

Example:



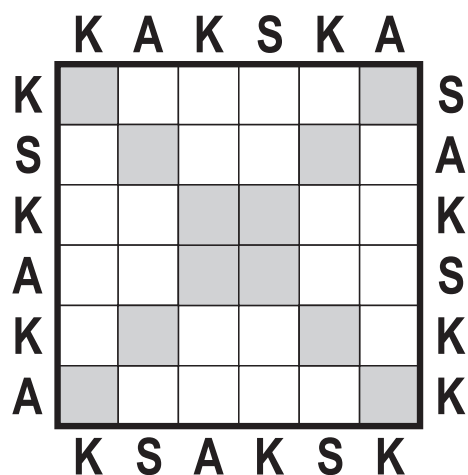
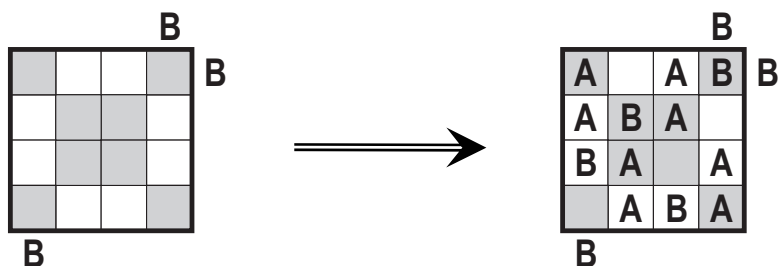
30 POINTS

## SAKK DIAGONAL SIDE VIEW (15+30 POINTS)

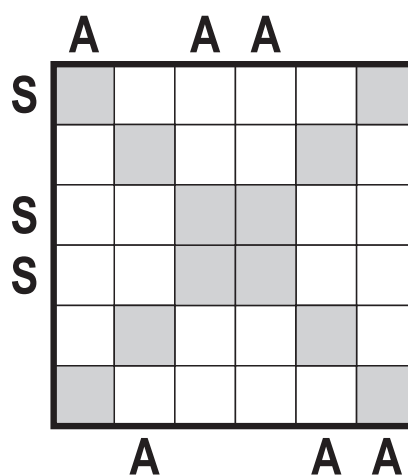
Fill in the grid such that each row, each column and both main diagonals contain each letter of the word SAKK exactly once. Letters outside the grid reveal the first letter of the given row or column from that direction.

*In the example, letters of the word AAB are used.*

Example:



15 POINTS



30 POINTS

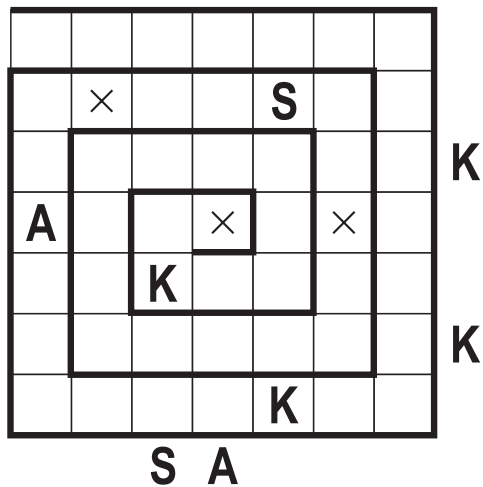
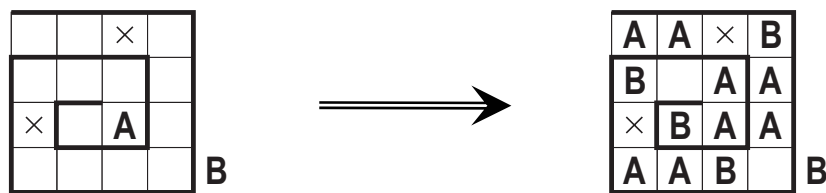
## SAKK SNAIL WITH SIDE VIEW (25+40 POINTS)

Fill in the grid such that each row and each column contains each letter of the word SAKK exactly once. Squares containing X cannot contain any other letter. Letters outside the grid reveal the first letter of the given row or column from that direction.

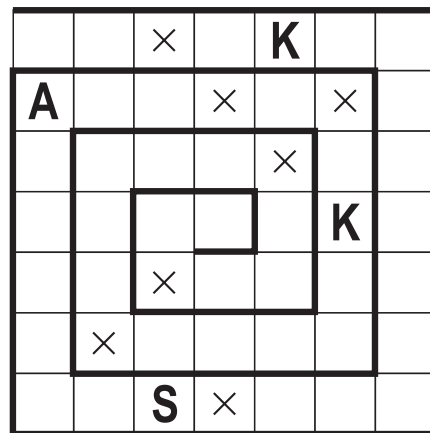
Along the snail, from the outer end towards the centre, the order of the letters visited must be S-A-K-K-S-A-K-K-...

*In the example, letters of the word AAB are used.*

Example:



25 POINTS



40 POINTS

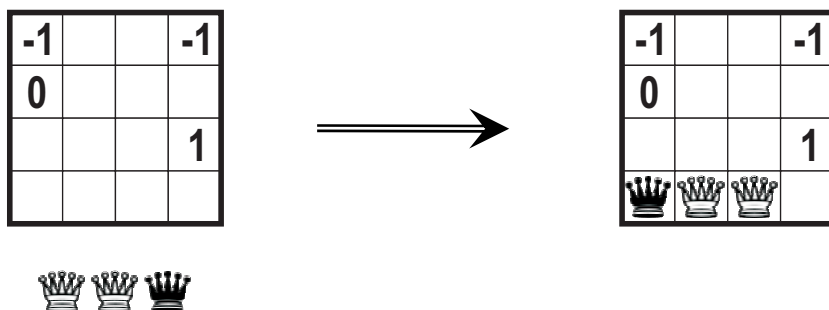
## QUEENS' (AND KNIGHTS') PARK (25+25+25 POINTS)

Find the given chess pieces in the figure so that none of them stands on a number. White pieces are considered attacking, whereas Black is defending. Numbers equal to the attack count of their square, i.e. the number of attacking pieces minus the number of defending ones.

*Given that none of the puzzles contains more than one black piece, a  $-1$  obviously means that a black piece defends the square and none of the white ones attacks it. However, a  $0$  could mean either one attacking (white) and one defending (black) piece or none at all.*

Numbers do not block pieces from attacking or defending squares beyond them. Other pieces, however, do provide such blocking.

Example:



	2		0	-1
			1	2
	4	3		



25 POINTS

-1			1	
		-1	0	
				0
				1
	3			2



25 POINTS

0					
		3			
					4
			-1		



25POINTS

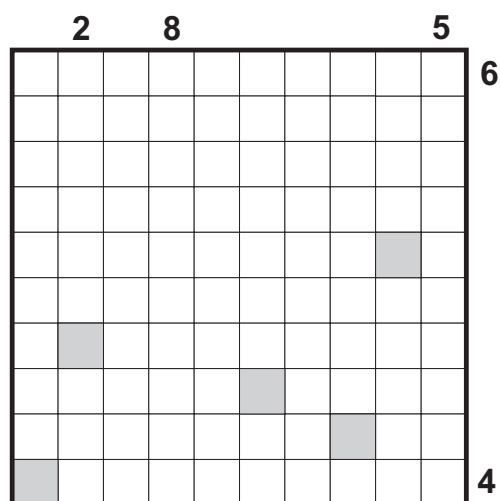
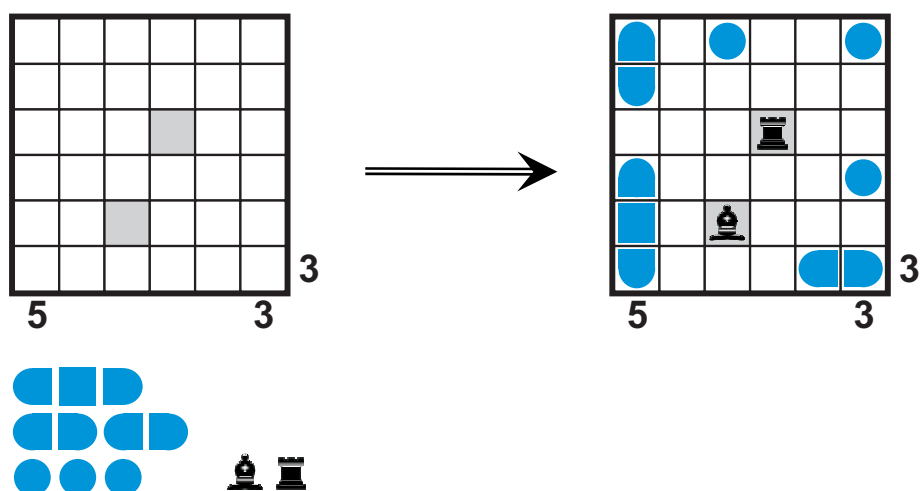
## CHess BATTLESHIPS (30+50 POINTS)

Put five chess pieces: a king (K), a queen (Q), a rook (R), a bishop (B) and a knight (N) into the grey cells so that none of them attack (defend) each other. Then find the ships of the fleet. Ships do not touch each other, not even diagonally. Ships do not touch the chess pieces either, not even diagonally. Moreover, no part of any ship is attacked by any of the chess pieces.

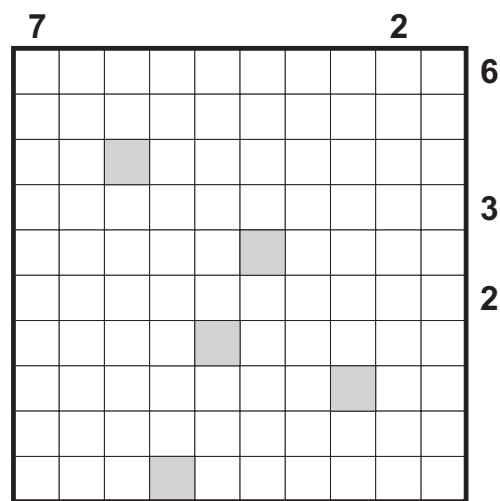
Numbers outside reveal the number of ship segments in the given row or column.

*In the example, a different fleet and only the Bishop and the Rook are used.*

Example:



30 POINTS

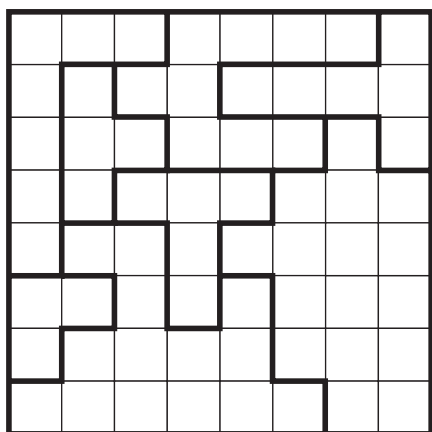
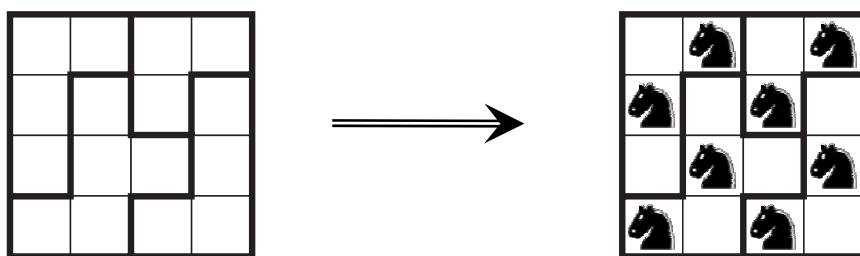


50 POINTS

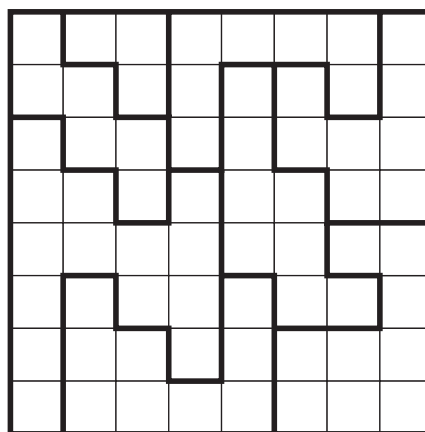
## KNIGHTS' BATTLE (30+40+50 POINTS)

Put some Knights into the figure such that each row, each column and each area (marked by thick lines) contains exactly two of them. Knights may be occupying neighbouring squares, but they cannot attack (defend) each other.

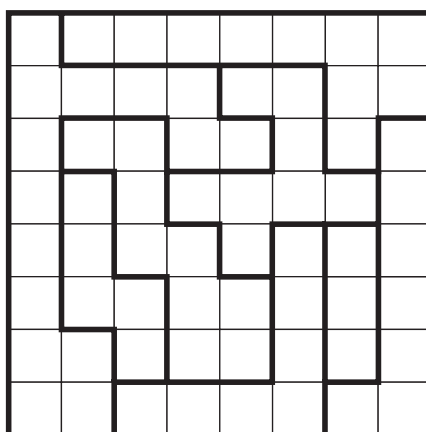
Example:



30 POINTS



40 POINTS



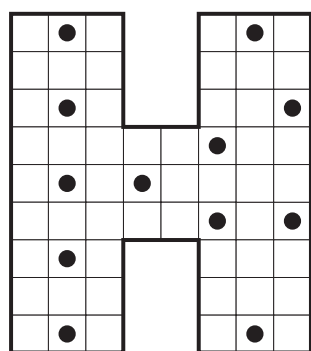
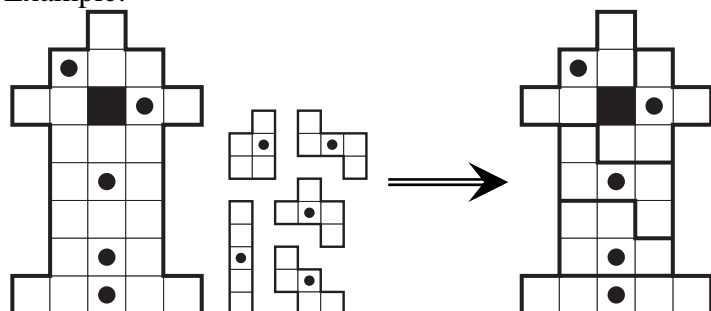
50 POINTS



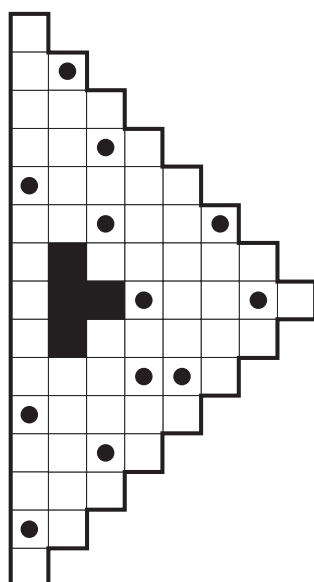
## DOTTED PENTOMINO (40+40+40 POINTS)

Find the twelve pentominoes in the given shapes. Pentominoes may be rotated but may not be reflected. The positions of their dots are given.

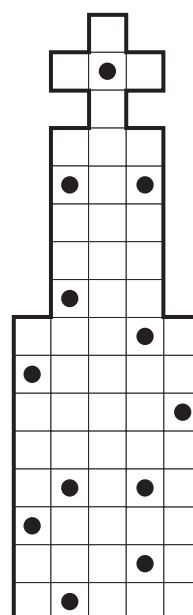
Example:



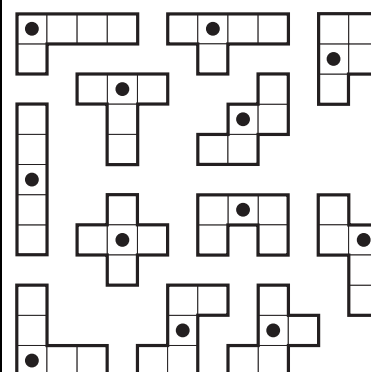
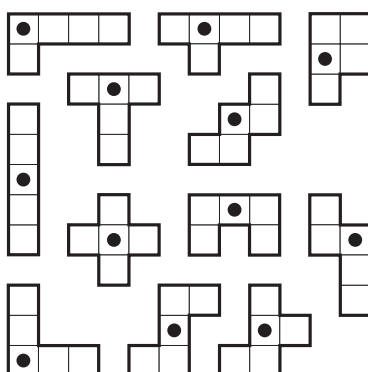
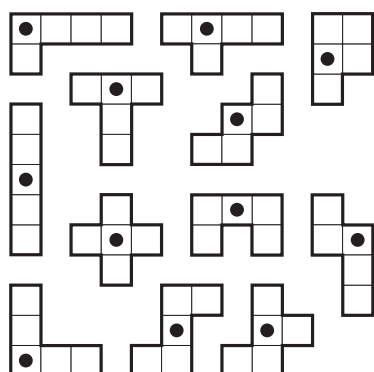
40 POINTS



40 POINTS



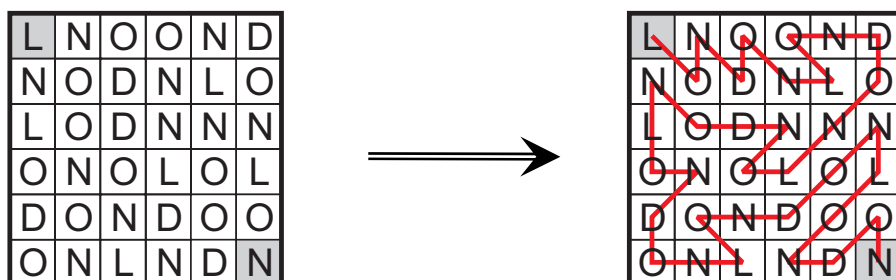
40 POINTS



## PASSWORD PATH (30+30+90 POINTS)

Find a path from the top left corner to the bottom right corner. The path can travel horizontally, vertically or diagonally and it passes through all squares but never crosses itself. Reading the letters in the order they are visited gives the repetition of the letters of the given password.

Example:



Password: LONDON

C	A	B	P	A	B	L	C	A	P
C	A	P	L	A	A	N	A	A	B
A	A	A	C	A	C	A	C	C	L
P	C	N	N	A	L	A	C	N	A
A	N	C	C	B	A	P	A	N	C
B	L	A	A	A	P	A	B	L	A

Password: **CAPABLANCA**

(José Raúl, Cuban, 3<sup>rd</sup> World Chess Champion)

30 POINTS

E	E	E	U	W	W	E	E
E	U	W	E	U	E	W	U
E	W	U	E	E	E	E	U
W	U	E	U	E	W	U	W
E	E	U	W	W	E	E	E

Password: **EUWE**

(Max, Dutch, 5<sup>th</sup> World Chess Champion)

30 POINTS

A	N	D	D	A	N	A	N	D	A
N	A	A	N	A	D	N	N	A	N
D	N	A	N	N	A	N	A	D	A
A	N	A	D	A	N	A	A	N	N
N	D	A	N	A	N	D	N	A	D
A	N	N	D	A	N	A	A	N	D

Password: **ANAND**

(Viswanathan, Indian,  
Reigning World Chess Champion)

90 POINTS

## GRANDMASTER VALUATION (150 POINTS)

All the numbers between 1 and 26 have been encoded into letters. Different letters denote different numbers. A value of a word means the sum of the numbers its letters encode.

Values for the names of a few chess players are given below. The order of surname and given name(s) is the same as the order their value is shown.

What are the values of the words KING and QUEEN?

Example:

ECCE, ABBA = 18, 6

AC, DC = 6, 8

What is the value of BAD?

Solution: BAD = 6 (A=1, B=2, C=5, D=3, E=4).

PORTISCH, LAJOS	111, 73	<i>These six players were members of the 1978 Olympic Gold Medalist Team Hungary, in table order</i>
RIBLI, ZOLTAN	54, 101	
SAX, GYULA	70, 46	
ADORJAN, ANDRAS	123, 126	
CSOM, ISTVAN	72, 123	
VADASZ, LASZLO	135, 91	
EUWE, MAX	7, 69	<i>5th World Chess Champion</i>
ANAND, VISWANATHAN	126, 215	<i>Reigning World Chess Champion</i>
LEKO, PETER	29, 31	<i>Hungary's No 1</i>
POLGAR, JUDIT	65, 65	<i>Best female player ever</i>
KASPAROV, GARRY	129, 44	<i>13th World Chess Champion</i>
FISCHER, ROBERT JAMES	92, 42, 77	<i>11th World Chess Champion</i>
BU, XIANGZHI	12, 147	<i>China's No 1</i>

KING: \_\_\_\_\_

50 POINTS

QUEEN: \_\_\_\_\_

100 POINTS

## CHess TOURNAMENT (25+40 POINTS)

The figure below shows the cross-table of a single all-play-all chess tournament (i.e. everyone played one game against everyone else). However, some of the scores and sums have been erased. Fill in match results, total scores and Berger scores with the following kept in mind:

- A result can be 1-0,  $\frac{1}{2}$ - $\frac{1}{2}$  or 0-1. It has to be written into both halves of the table.
- Total score is simply the sum of the game results.
- The Berger score of any player is the sum of the scores of opponents they have defeated plus half the sum of the scores of opponents they have drawn against.
- Players are ordered by their total score. Highest on top, lowest on the bottom. Players with the same total score are ordered by their Berger score: the higher the better.
- No two players are tied after taking Berger score into account.

Example:

	A	B	C	Score	BS
1. A					
2. B					0,5
3. C					

⇒

	A	B	C	Score	BS
1. A		1	X	1,5	1,25
2. B	0		1	1	0,5
3. C	X	0		0,5	0,75

25 POINTS		ADAM	BEN	CHUCK	DAN	TOTAL	BERGER
1.	ADAM						
2.	BEN						
3.	CHUCK						
4.	DAN						1,25

40 POINTS		ANN	BESS	CINDY	DOLLY	EDITH	FLORA	TOTAL	BERGER
1.	ANN								
2.	BESS							4	
3.	CINDY								
4.	DOLLY					X		2	
5.	EDITH				X				2
6.	FLORA								4

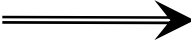
## CHESS TOURNAMENT (90 POINTS)

In 2005, the World Chess Championship was organised as a double all-play-all event involving 8 players in San Luís, Argentina. The puzzle below captures the half time standings, i.e. similarly to the previous two puzzles, these results come from a single all-play-all.

The rules are exactly the same.

Example:

	A	B	C	Score	BS
1. A					
2. B					0,5
3. C					



	A	B	C	Score	BS
1. A		1	X	1,5	1,25
2. B	0		1	1	0,5
3. C	X	0		0,5	0,75

90 POINTS		TOPALOV	SVIDLER	ANAND	LÉKÓ	KASIMDZHANOV	MOROZEVICH	ADAMS	POLGÁR	TOTAL SCORE	BERGER SCORE
1.	TOPALOV									6,5	19,75
2.	SVIDLER							X		4,5	12,75
3.	ANAND									3,5	
4.	LÉKÓ					X					8,75
5.	KASIMDZHANOV				X				0		10
6.	MOROZEVICH									3	
7.	ADAMS		X							2	6,25
8.	POLGÁR					1					5,5