

Qualification 2004

Part II – Solutions

1. Magic Square

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

a	b	c
2	4	3

2. Minesweeper

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

α	β	γ	δ	ϵ	ζ	η	θ	ι	κ
1	4	5	2	1	1	4	2	2	3

3. Eminent Domain

	4					3			
		5			1 _{ρ}		2		1
	2		2			2		2	
				1		1 _{τ}	2		
	1 _{v}			3				3	
5			1 _{π}		1			2	
		3				2		3	8
	2					1		1 _{σ}	
			3	1		2			
		2			1		2		3
4		3			3			1	
				7					4

π	ρ	σ	τ	v
A	D	B	B	D

4. Easy as ABCD

	A		A	D		B		B	B
		C	A			B	D		D
B			B	D	A	C			C
	A	D		B	C				C
D	D	A	C					B	
D			D	C				B	A
		B					A	C	D
	C				D	A	B		B
A				A	B			D	C
	B					D	C	A	A
	B	B	D	A		D	C		

α	β	γ	δ	ϵ	ζ
5	1	4	2	1	4

5. Skyscrapers

		1	2				4	
	4	7	6	2	1	5	3	
	7	6	5	1	4	3	2	6
4	1	2	3	7	5	6	4	
3	3	1	2	6	7	4	5	2
	2	3	4	5	6	1	7	
	6	5	7	4	3	2	1	5
	5	4	1	3	2	7	6	
				5	4	1		

a	b	c	d
6	2	3	5

6. Pointing Arrows

5 ↓	1 ←	2 ←	3 ↓	1 →	4 ←	4 ↓
6 →	4 ↓	2 ←	1 ↑	3 ↓	5 ←	6 ←
3 →	4 ↓	1 ↑	1 →	2 ↓	2 ↑	2 ↑
2 ↓	3 →	2 ↓	2 →	3 ↑	1 →	3 ↑
4 ↑	2 ↓	3 →	3 ↑	1 →	4 ↑	4 ↑
5 ↑	1 ←	2 ←	3 ←	1 →	4 ↑	4 ↑
4 →	4 →	3 ↑	2 ←	3 ←	1 →	4 ↑

A	B	C	D	E	F	G
5	4	1	3	3	4	4

7. Number Crossword

				34	8	17						16	8	15	
		9	23	5	4	8	29	7		11	7	4	1	2	23
38	4	3	7	1	9	8	6		25	3	5	7	4	6	
25	5	8	9	3	10	6	1	4	2	7	10	1	9		
	8	2	6		11	7	4	19	5	6	19	6	5	8	
7	1	4	2		11	3	1	7	40	16	1	2	3		
20	7	6	4	3	12	3	1	8	9	2	37				
			45	1	4	8	5	6	9	7	3	2	35	13	
			16	17	1	4	2	3	7	30	9	7	8	6	
	7	4	1	2		6	2	1	3		21	9	5	7	
19	16				23	11			12	5	7	10	4	6	3
	7	3	9		15	8	4		9	5		18	2	6	9
8	6	2		33	8	9	7	5	4	5		2	6	9	1
21	3	1	7	4	6		28	4	6	3	5	1	7	2	
		10	6	1	3					11	2	1	8		