

Part III – Solutions

1. Easy as ABCD Varia

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

2. Hens and Chicks

A 12x12 grid with a black path. The path starts at (1,1), goes right to (1,12), then down to (12,12), then left to (12,1), then up to (1,1). The path is a single continuous line. The grid is divided into 144 cells. Some cells are shaded grey and contain numbers: (1,5) contains 5, (2,1) contains 7, (4,4) contains 11, (4,5) contains 12, (11,12) contains 6, and (12,4) contains 4.

3. Triples

	A					A		
	A			A		A		
	A		A			A		
B		A		B	B	B		
B					A			
B	A		B	B	B	A	B	B
		A			A			
B			A	B				
B					B			
B			A	A	A	B		
	4	1		4		5	1	

4. Black Out

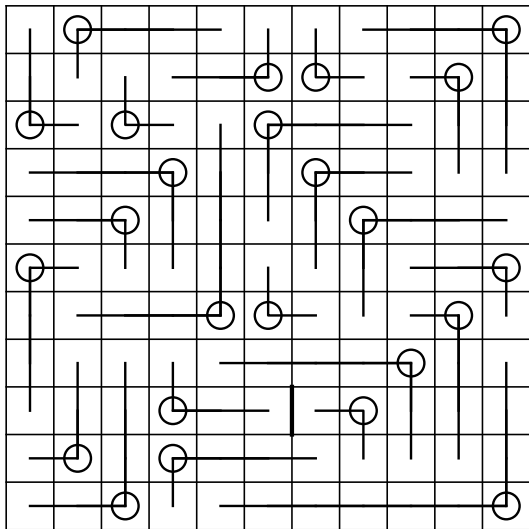
5. Penta Loop

[illegible]

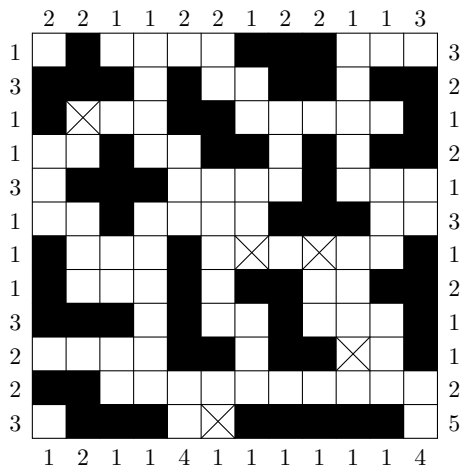
6. Adjacent Products

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

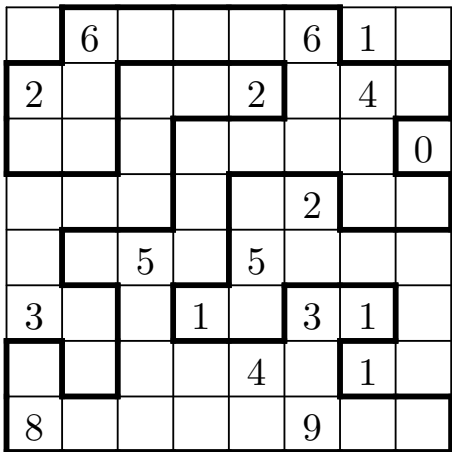
7. L-shapes



8. Penta Placement



9. Inside-Outside Loop



10. Disquare

	2		12			20
				9	1	14
6		3				10
	5				7	9
		8		10		12
11			4			18
						15
17	7	11	16	19	8	13

11. Skyscrapers Varia

	2	2	2	2	3	3	5	3	
2	6	4	7	7	c	a	a	5	2
2	6	4	8	8	c	7	b	5	3
1	8	8	4	4	5	7	b	a	4
1	7	c	c	6	5	4	4	a	5
2	7	5	b	6	8	8	c	c	2
3	4	5	b	a	a	c	6	6	1
3	4	a	a	b	b	c	7	8	1
5	b	b	5	5	6	6	7	8	1
	4	3	2	3	2	2	1	1	

with $(a, b, c) = (1, 2, 3), (1, 3, 2),$ or $(2, 3, 1)$
(three solutions !).

12. Magic Square Varia

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