Name

Rectangles	20 points	$(10{+}10)$
Domino Hunt	40 points	
Mirrors	$15 {\rm points}$	$(5{+}10)$
Skyscrapers	$15 {\rm points}$	$(5{+}10)$
Tri-Squares	$25 \mathrm{points}$	$(10{+}15)$
Meanders	$25 \mathrm{points}$	$(10{+}15)$
Fences	$15 {\rm points}$	$(5{+}10)$
Tents	$15 {\rm points}$	$(5{+}10)$
Hungarian Count	40 points	
Loopfinder	$15 {\rm points}$	$(5{+}10)$
ABC Connect	10 points	
Number Crossword	$15 {\rm points}$	









1. Rectangles

20 points

Divide the grid into rectangles so that each rectangle contains exactly one number, and so that each number represents the number of squares of its corresponding rectangle.

	4					3		2		4	2
			3			2	4		6		
		3									2
6			2								
					8						
					3		2				
					3		2			10	
2	10				2				4		
	6			4		6	2	8			
					3			2			
2					3	2					4
	3					4	2		2		2

4				2			2				8
		10									
						4	2				
					6						
		3				4	2	10			
4					6		4				10
			8								
				6							
						2				8	
	8	2							4		
		3			3					4	
3			2	2			2		4		2



2. Domino Hunt 40 points

A complete domino set (55 dominos from 0-0 to 9-9) has been placed in the grid. The sides of the dominoes have been erased and the spots have been replaced by numbers. Draw the edges of the dominoes in the grid.





3. Mirrors

15 points

Place ten diagonal two-faced mirrors (each the size of a square) in each grid, in such a way that the trajectory of a ray of light emitted straight into the diagram from anywhere on its boundary passes through a number of squares equal to the given value.

	6	2	7	3	5	3	
2							3
5							7
12							3
5							5
3							12
5							12
	6	3	12	9	5	9	

	1	11	10	4	6	11	
1							10
7							4
4							7
8							6
11							2
2							8
	4	2	6	11	6	2	



4. Skyscrapers

15 points

Each grid symbolizes a group of skyscrapers. Each row and column contains skyscrapers of different heights (1-5). The numbers outside the grid indicate how many skyscrapers are visible from that direction (a building located behind a taller one in the same row is completely hidden).

3	4	2		
				2
				3
				4
				3
	2		4	

	1		3	2	
					4
2					3
4					
				1	



5. Tri-Squares

25 points

Place the numbers 1 to 15 into each grid, in order, so that each number is in the same row or column as the number preceding it. The resulting path may cross or double-back on itself, and successive numbers need not be adjacent. There must be exactly three numbers placed in each row and column. The numbers outside the grid reveal the sum of the numbers in the corresponding row or column.





6. Meander

25 points

Locate the route, starting in the upper left corner and finishing in the lower right corner of each grid. The route meanders horizontally or vertically, and the numbers outside each grid indicate the total of occupied squares in that row or column.







7. Fences

15 points

Draw a single continuous loop by connecting neighboring dots horizontally or vertically (but not diagonally). A numbered square indicates exactly how many of its four edges are used in the loop.

г т т т т	тттэ	· · · · · · · · · ·
	0	
+ + + + + +	+ $+$ $+$ $+$ $+$ $+$	+ + $+$ + $+$ + $+$ + $+$ + $+$
+ + + + + +	1 + + + +	1 + 2 + 3 + 3 + 4 + 4 + 4
	+ $+$ 1 $+$ 2 $+$	1
1 2	3	2 2
r + + + +	1	
+ + + + + + + + + + + + + + + + + + + +	+ + + + + + + + + + + + + + + + + + +	+ + + + + + + + + + + + + + + + + + +
+ + + + + +	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	



8. Tents

15 points

Locate the tents in each grid. Each tree (symbolized by T in the diagram) is connected to exactly one tent, found in a horizontally or vertically adjacent square. Tents do not touch each other, not even diagonally. The numbers outside the grid reveal the total number of tents in the corresponding row or column.

	1	3	2	2	3	1	3	1	3	2
3	Т			Т				Т		
2			Т				Т			
3					Т			Т		
1						Т			Т	Т
3	Т			Т						
1						Т		Т		
2								Т		
2					Т					
2		Т				Т				
2	Т			Т						Т

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

Part I

9. Hungarian Count 40 points

Listed below are numbers in Hungarian. Pack these words into the grid, reading either across (left to right) or down (top to bottom). Ignore accents and diacritical marks (also treat GY and NY as two letters each, even though they are considered as single letters in Hungarian). Each square contains a letter and no square is used more than once. Some letters are already placed.

0	NULLA	5	OT	10	TIZ	60	HATVAN
1	EGY	6	HAT	20	HUSZ	70	HETVEN
2	KETTO	7	HET	30	HARMINC	80	NYOLCVAN
3	HAROM	8	NYOLC	40	NEGYVEN	90	KILENCVEN
4	NEGY	9	KILENC	50	OTVEN	100	SZAZ

	Е				М	
			\mathbf{S}			
						K
Е				Η		
		0				
	Μ		0		Ι	
		А				
Т						



10. Loopfinder

15 points

Draw a continuous loop of straight sections such that: the loop connects the middles of the squares, and may turn only at middle points of squares ; the loop must not cross or overlap itself and must visit all squares. Some parts are already given.

	_			



11. ABC Connect 10 points

Connect the same letters with an unbroken line. The lines can pass only through the middles of the squares and cannot overlap nor cross each other.

А	В				А	
			D			
	Е			F	Е	
		D				
			С			
С		F				
В						



12. Number Crossword 15 points

Enter digits from 1 to 9 into the grid, one per square, so that the digits in each series of empty squares multiply up to the number in front of, or above the series.

No digit in ever repeated in a continuous series of digits, and all the digits are used exactly twice in the whole grid.

