

Heaven and Earth Designs

4 Horseman

(Large Format)

Chart No: HAERTT 2630

Chart Design by Michele Sayetta

Artwork by Ruth Thompson



Finished Design Size 625 W by 426 H (25 W X 18-1/8 H inches on 25ct)

Chart Contains 87 Colors

Heaven and Earth Designs Inc.

89198 Easy Way Road

Seaside Oregon 97138

320-214-7998

www.heavenandearthdesigns.com

Copyright Heaven and Earth Designs 2013

Copyright Ruth Thompson 2013

Congratulations on buying a **Heaven and Earth Designs LLC** Cross Stitch Chart.

We know it will bring you many hours of pleasurable stitching and believe the final result will be something to love and admire forever.

Included with your chart is a clear plastic bag to protect your chart, and a coded thread list for the threads you will need to complete your project. Our charts are designed to use DMC stranded cotton threads and, where appropriate, Kreinik metallic thread.

Chart Instructions:

1. This chart is made up of several numbered pages beginning at the top left corner of the first page. The pages of chart are laid out from left to right in rows e.g. 1 2 3 4, 5 6 7 8. Although each chart is marked with arrows which indicate the centre, we believe you will find it easier to begin from the top left corner of page 1 and follow the chart page by page to the bottom right corner of the last page.
2. We recommend you stitch your design on either 18 count Aida or 25 count Linen. using 2 strands over one in each case.
3. At the top of the thread list you will find our recommendation for the fabric colour. We recommend purchasing a piece of fabric that equates to the design size plus 3 inches [75mm] all around, to allow for framing and matting.
4. Because of the large number of stitches, we have found it to be easier if you stitch one 10X10 grid at a time and then continue on to the next 10 x 10 grid.
5. Stitch each page until it is completed and then move on to the next. On each page there is a number at the top left that indicates the page number. On each corner is a number in parenthesis that indicates the connecting page, unless there is not one.
6. Under International Copyright Laws, you may copy the chart for your own use. We recommend that you use a copy as your working document. You may also wish to enlarge the pages to make the symbols easier to read.






















































If you have any questions regarding this chart please feel free to contact us.











































Heaven and Earth Designs LLC
320-214-7998














<http://www.heavenandearthdesigns.com>

Pattern Name: 4 Horseman-Thompson
Designed By: Michele Sayetta
Company: Heaven and Earth Designs Inc.
Copyright: 2013 Ruth Thompson ®
Fabric: Linen 25, White
 625w X 456h Stitches
Size: 25 Count, 25w X 18-1/8h in

Floss Used for Full Stitches:

Symbol	Strands	Type	Number	Color
	H	2	DMC 032	Kreinik #4
		2	DMC 159	Gray Blue-LT
	S	2	DMC 169	Pewter-LT
		2	DMC 224	Shell Pink-VY LT
		2	DMC 310	Black
	4	2	DMC 312	Baby Blue-VY DK
		2	DMC 315	Antique Mauve-VY DK
	V	2	DMC 317	Pewter Gray
		2	DMC 318	Steel Gray-LT
)	2	DMC 326	Rose-VY DK
	#	2	DMC 350	Coral-MD
		2	DMC 351	Coral
		2	DMC 355	Terra Cotta-DK
		2	DMC 413	Pewter Gray-DK
	C	2	DMC 436	Tan
		2	DMC 445	Lemon-LT
	^	2	DMC 451	Shell Gray-DK
		2	DMC 452	Shell Gray-MD
		2	DMC 524	Fern Green-VY LT
)	2	DMC 608	Bright Orange
		2	DMC 646	Beaver Gray-DK
		2	DMC 647	Beaver Gray-MD
		2	DMC 648	Beaver Gray-LT
		2	DMC 680	Old Gold-DK
		2	DMC 721	Orange Spice-MD
		2	DMC 722	Orange Spice-LT
		2	DMC 725	Topaz
	H	2	DMC 726	Topaz-LT
		2	DMC 728	Topaz
		2	DMC 729	Old Gold-MD
		2	DMC 738	Tan-VY LT
	L	2	DMC 742	Tangerine-LT

Symbol	Strands	Type	Number	Color
	✂	2	DMC 744	Yellow-Pale
	♥	2	DMC 754	Peach-LT
	△	2	DMC 762	Pearl Gray-VYLT
	3	2	DMC 775	Baby Blue-VYLT
	⌘	2	DMC 777	Raspberry-VYDK
	α	2	DMC 779	Cocoa-DK
	⌘	2	DMC 783	Topaz-MD
	\$	2	DMC 814	Garnet-DK
	∕	2	DMC 822	Beige Gray-LT
	⊗	2	DMC 838	Beige Brown-VYDK
	□	2	DMC 842	Beige Brown-VYLT
	≡	2	DMC 900	Burnt Orange-DK
	⋈	2	DMC 930	Antique Blue-DK
	♣	2	DMC 931	Antique Blue-MD
	✕	2	DMC 934	Black Avocado Green
	⋈	2	DMC 959	Sea Green-MD
	⌘	2	DMC 961	Dusty Rose-DK
	◐	2	DMC 970	Pumpkin-LT
	m	2	DMC 3024	Brown Gray-VYLT
	⌘	2	DMC 3033	Mocha Brown-VYLT
	✱	2	DMC 3041	Antique Violet-MD
	>	2	DMC 3046	Yellow Beige-MD
	⊕	2	DMC 3078	Golden Yellow-VYLT
	⊗	2	DMC 3328	Salmon-DK
	✱	2	DMC 3341	Apricot
	⊠	2	DMC 3371	Black Brown
	*	2	DMC 3689	Mauve-LT
	↑	2	DMC 3722	Shell Pink-MD
	2	2	DMC 3747	Blue Violet-VYLT
	7	2	DMC 3752	Antique Blue-VYLT
	↓	2	DMC 3773	Desert Sand-MD
	↘	2	DMC 3776	Mahogany-LT
	⌘	2	DMC 3778	Terra Cotta-LT
	⌘	2	DMC 3787	Brown Gray-DK
	⌘	2	DMC 3799	Pewter Gray-VYDK
	≈	2	DMC 3810	Turquoise-DK
	≡	2	DMC 3820	Straw-DK
	▨	2	DMC 3821	Straw
	√	2	DMC 3822	Straw-LT
	⌘	2	DMC 3823	Yellow-UL Pale
	√	2	DMC 3824	Apricot-LT
	√	2	DMC 3830	Terra Cotta-MD











































Symbol	Strands	Type	Number	Color
	¢	2	DMC 3831	Raspberry-DK
	«	2	DMC 3832	Raspberry-MD
	✕	2	DMC 3834	Grape-DK
	⊛	2	DMC 3836	Grape-LT
	//	2	DMC 3854	Autumn Gold-MD
	T	2	DMC 3856	Mahogany-UL VY LT
	➔	2	DMC 3858	Rosewood-MD
	0	2	DMC 3860	Cocoa
	‡	2	DMC 3861	Cocoa-LT
	▲	2	DMC 3862	Mocha Beige-DK
	▼	2	DMC 3863	Mocha Beige-MD
	e	2	DMC 3864	Mocha Beige-LT
	☆	2	DMC 3866	Mocha Brown-UL VY LT










Usage Summary

Strands Per Skein: 6

Skein Length: 313.0 in

Type	Number	Full	Half	Quarter	Petite	Back(in)	Str(in)	Spec(in)	French	Bead	Skein Est.
□ DMC	032	4559	0	0	0	0.0	0.0	0.0	0	0	2.000
■ DMC	159	40	0	0	0	0.0	0.0	0.0	0	0	1.000
■ DMC	169	908	0	0	0	0.0	0.0	0.0	0	0	1.000
■ DMC	224	463	0	0	0	0.0	0.0	0.0	0	0	1.000
■ DMC	310	33723	0	0	0	0.0	0.0	0.0	0	0	10.000
■ DMC	312	15	0	0	0	0.0	0.0	0.0	0	0	1.000
■ DMC	315	750	0	0	0	0.0	0.0	0.0	0	0	1.000
■ DMC	317	2184	0	0	0	0.0	0.0	0.0	0	0	1.000
■ DMC	318	612	0	0	0	0.0	0.0	0.0	0	0	1.000
■ DMC	326	11673	0	0	0	0.0	0.0	0.0	0	0	4.000
■ DMC	350	10044	0	0	0	0.0	0.0	0.0	0	0	3.000
■ DMC	351	2492	0	0	0	0.0	0.0	0.0	0	0	1.000
■ DMC	355	3120	0	0	0	0.0	0.0	0.0	0	0	1.000
■ DMC	413	2376	0	0	0	0.0	0.0	0.0	0	0	1.000
■ DMC	436	1818	0	0	0	0.0	0.0	0.0	0	0	1.000
■ DMC	445	5543	0	0	0	0.0	0.0	0.0	0	0	2.000
■ DMC	451	2342	0	0	0	0.0	0.0	0.0	0	0	1.000
■ DMC	452	2962	0	0	0	0.0	0.0	0.0	0	0	1.000
■ DMC	524	968	0	0	0	0.0	0.0	0.0	0	0	1.000
■ DMC	608	4056	0	0	0	0.0	0.0	0.0	0	0	2.000
■ DMC	646	1768	0	0	0	0.0	0.0	0.0	0	0	1.000
■ DMC	647	2214	0	0	0	0.0	0.0	0.0	0	0	1.000
■ DMC	648	1768	0	0	0	0.0	0.0	0.0	0	0	1.000
■ DMC	680	443	0	0	0	0.0	0.0	0.0	0	0	1.000
■ DMC	721	17243	0	0	0	0.0	0.0	0.0	0	0	5.000
■ DMC	722	5302	0	0	0	0.0	0.0	0.0	0	0	2.000
■ DMC	725	5755	0	0	0	0.0	0.0	0.0	0	0	2.000
■ DMC	726	8302	0	0	0	0.0	0.0	0.0	0	0	3.000
■ DMC	728	4769	0	0	0	0.0	0.0	0.0	0	0	2.000
■ DMC	729	534	0	0	0	0.0	0.0	0.0	0	0	1.000
■ DMC	738	966	0	0	0	0.0	0.0	0.0	0	0	1.000
■ DMC	742	9318	0	0	0	0.0	0.0	0.0	0	0	3.000
■ DMC	744	3673	0	0	0	0.0	0.0	0.0	0	0	2.000
■ DMC	754	2010	0	0	0	0.0	0.0	0.0	0	0	1.000
■ DMC	762	367	0	0	0	0.0	0.0	0.0	0	0	1.000
■ DMC	775	71	0	0	0	0.0	0.0	0.0	0	0	1.000

Type	Number	Full	Half	Quarter	Petite	Back(in)	Str(in)	Spec(in)	French	Bead	Skein Est.
 DMC 777	11368	0	0	0	0.0	0.0	0.0	0	0	4.000	
 DMC 779	4736	0	0	0	0.0	0.0	0.0	0	0	2.000	
 DMC 783	421	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 814	13082	0	0	0	0.0	0.0	0.0	0	0	4.000	
 DMC 822	944	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 838	3746	0	0	0	0.0	0.0	0.0	0	0	2.000	
 DMC 842	2154	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 900	11062	0	0	0	0.0	0.0	0.0	0	0	4.000	
 DMC 930	116	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 931	98	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 934	3288	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 959	36	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 961	95	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 970	4016	0	0	0	0.0	0.0	0.0	0	0	2.000	
 DMC 3024	1601	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 3033	1582	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 3041	932	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 3046	346	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 3078	4599	0	0	0	0.0	0.0	0.0	0	0	2.000	
 DMC 3328	1158	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 3341	2061	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 3371	10730	0	0	0	0.0	0.0	0.0	0	0	3.000	
 DMC 3689	71	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 3722	1049	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 3747	60	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 3752	112	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 3773	1617	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 3776	1835	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 3778	1392	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 3787	2468	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 3799	4622	0	0	0	0.0	0.0	0.0	0	0	2.000	
 DMC 3810	58	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 3820	97	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 3821	191	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 3822	2178	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 3823	6141	0	0	0	0.0	0.0	0.0	0	0	2.000	
 DMC 3824	947	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 3830	3733	0	0	0	0.0	0.0	0.0	0	0	2.000	
 DMC 3831	1893	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 3832	16	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 3834	205	0	0	0	0.0	0.0	0.0	0	0	1.000	
 DMC 3836	32	0	0	0	0.0	0.0	0.0	0	0	1.000	

Type	Number	Full	Half	Quarter	Petite	Back(in)	Str(in)	Spec(in)	French	Bead	Skein Est.
 DMC	3854	4100	0	0	0	0.0	0.0	0.0	0	0	2.000
 DMC	3856	3259	0	0	0	0.0	0.0	0.0	0	0	1.000
 DMC	3858	2381	0	0	0	0.0	0.0	0.0	0	0	1.000
 DMC	3860	3182	0	0	0	0.0	0.0	0.0	0	0	1.000
 DMC	3861	2894	0	0	0	0.0	0.0	0.0	0	0	1.000
 DMC	3862	1544	0	0	0	0.0	0.0	0.0	0	0	1.000
 DMC	3863	2981	0	0	0	0.0	0.0	0.0	0	0	1.000
 DMC	3864	1218	0	0	0	0.0	0.0	0.0	0	0	1.000
 DMC	3866	1402	0	0	0	0.0	0.0	0.0	0	0	1.000

[illegible]

	70	80	90	100	110	120
10
20
30
40
50
60
70
80

	130	140	150	160	170	180
10
20
30
40
50
60
70
80

(16)

	250	260	270	280	290	300	310
10	X	X	X	X	X	X	X
20	X	X	X	X	X	X	X
30	X	X	X	X	X	X	X
40	X	X	X	X	X	X	X
50	X	X	X	X	X	X	X
60	X	X	X	X	X	X	X
70	X	X	X	X	X	X	X
80	X	X	X	X	X	X	X
90	X	X	X	X	X	X	X
100	X	X	X	X	X	X	X
110	X	X	X	X	X	X	X
120	X	X	X	X	X	X	X
130	X	X	X	X	X	X	X
140	X	X	X	X	X	X	X
150	X	X	X	X	X	X	X
160	X	X	X	X	X	X	X
170	X	X	X	X	X	X	X
180	X	X	X	X	X	X	X
190	X	X	X	X	X	X	X
200	X	X	X	X	X	X	X
210	X	X	X	X	X	X	X
220	X	X	X	X	X	X	X
230	X	X	X	X	X	X	X
240	X	X	X	X	X	X	X
250	X	X	X	X	X	X	X
260	X	X	X	X	X	X	X
270	X	X	X	X	X	X	X
280	X	X	X	X	X	X	X
290	X	X	X	X	X	X	X
300	X	X	X	X	X	X	X
310	X	X	X	X	X	X	X
320	X	X	X	X	X	X	X
330	X	X	X	X	X	X	X
340	X	X	X	X	X	X	X
350	X	X	X	X	X	X	X
360	X	X	X	X	X	X	X
370	X	X	X	X	X	X	X
380	X	X	X	X	X	X	X
390	X	X	X	X	X	X	X
400	X	X	X	X	X	X	X
410	X	X	X	X	X	X	X
420	X	X	X	X	X	X	X
430	X	X	X	X	X	X	X
440	X	X	X	X	X	X	X
450	X	X	X	X	X	X	X
460	X	X	X	X	X	X	X
470	X	X	X	X	X	X	X
480	X	X	X	X	X	X	X
490	X	X	X	X	X	X	X
500	X	X	X	X	X	X	X
510	X	X	X	X	X	X	X
520	X	X	X	X	X	X	X
530	X	X	X	X	X	X	X
540	X	X	X	X	X	X	X
550	X	X	X	X	X	X	X
560	X	X	X	X	X	X	X
570	X	X	X	X	X	X	X
580	X	X	X	X	X	X	X
590	X	X	X	X	X	X	X
600	X	X	X	X	X	X	X
610	X	X	X	X	X	X	X
620	X	X	X	X	X	X	X
630	X	X	X	X	X	X	X
640	X	X	X	X	X	X	X
650	X	X	X	X	X	X	X
660	X	X	X	X	X	X	X
670	X	X	X	X	X	X	X
680	X	X	X	X	X	X	X
690	X	X	X	X	X	X	X
700	X	X	X	X	X	X	X
710	X	X	X	X	X	X	X
720	X	X	X	X	X	X	X
730	X	X	X	X	X	X	X
740	X	X	X	X	X	X	X
750	X	X	X	X	X	X	X
760	X	X	X	X	X	X	X
770	X	X	X	X	X	X	X
780	X	X	X	X	X	X	X
790	X	X	X	X	X	X	X
800	X	X	X	X	X	X	X
810	X	X	X	X	X	X	X
820	X	X	X	X	X	X	X
830	X	X	X	X	X	X	X
840	X	X	X	X	X	X	X
850	X	X	X	X	X	X	X
860	X	X	X	X	X	X	X
870	X	X	X	X	X	X	X
880	X	X	X	X	X	X	X
890	X	X	X	X	X	X	X
900	X	X	X	X	X	X	X
910	X	X	X	X	X	X	X
920	X	X	X	X	X	X	X
930	X	X	X	X	X	X	X
940	X	X	X	X	X	X	X
950	X	X	X	X	X	X	X
960	X	X	X	X	X	X	X
970	X	X	X	X	X	X	X
980	X	X	X	X	X	X	X
990	X	X	X	X	X	X	X
1000	X	X	X	X	X	X	X

[illegible]

[illegible]

(21)

	560	570	580	590	600	610	620
10	X	X	X	X	X	X	X
20	X	X	X	X	X	X	X
30	X	X	X	X	X	X	X
40	X	X	X	X	X	X	X
50	X	X	X	X	X	X	X
60	X	X	X	X	X	X	X
70	X	X	X	X	X	X	X
80	X	X	X	X	X	X	X
90	X	X	X	X	X	X	X
100	X	X	X	X	X	X	X
110	X	X	X	X	X	X	X
120	X	X	X	X	X	X	X
130	X	X	X	X	X	X	X
140	X	X	X	X	X	X	X
150	X	X	X	X	X	X	X
160	X	X	X	X	X	X	X
170	X	X	X	X	X	X	X
180	X	X	X	X	X	X	X
190	X	X	X	X	X	X	X
200	X	X	X	X	X	X	X
210	X	X	X	X	X	X	X
220	X	X	X	X	X	X	X
230	X	X	X	X	X	X	X
240	X	X	X	X	X	X	X
250	X	X	X	X	X	X	X
260	X	X	X	X	X	X	X
270	X	X	X	X	X	X	X
280	X	X	X	X	X	X	X
290	X	X	X	X	X	X	X
300	X	X	X	X	X	X	X
310	X	X	X	X	X	X	X
320	X	X	X	X	X	X	X
330	X	X	X	X	X	X	X
340	X	X	X	X	X	X	X
350	X	X	X	X	X	X	X
360	X	X	X	X	X	X	X
370	X	X	X	X	X	X	X
380	X	X	X	X	X	X	X
390	X	X	X	X	X	X	X
400	X	X	X	X	X	X	X
410	X	X	X	X	X	X	X
420	X	X	X	X	X	X	X
430	X	X	X	X	X	X	X
440	X	X	X	X	X	X	X
450	X	X	X	X	X	X	X
460	X	X	X	X	X	X	X
470	X	X	X	X	X	X	X
480	X	X	X	X	X	X	X
490	X	X	X	X	X	X	X
500	X	X	X	X	X	X	X
510	X	X	X	X	X	X	X
520	X	X	X	X	X	X	X
530	X	X	X	X	X	X	X
540	X	X	X	X	X	X	X
550	X	X	X	X	X	X	X
560	X	X	X	X	X	X	X
570	X	X	X	X	X	X	X
580	X	X	X	X	X	X	X
590	X	X	X	X	X	X	X
600	X	X	X	X	X	X	X
610	X	X	X	X	X	X	X
620	X	X	X	X	X	X	X
630	X	X	X	X	X	X	X
640	X	X	X	X	X	X	X
650	X	X	X	X	X	X	X
660	X	X	X	X	X	X	X
670	X	X	X	X	X	X	X
680	X	X	X	X	X	X	X
690	X	X	X	X	X	X	X
700	X	X	X	X	X	X	X
710	X	X	X	X	X	X	X
720	X	X	X	X	X	X	X
730	X	X	X	X	X	X	X
740	X	X	X	X	X	X	X
750	X	X	X	X	X	X	X
760	X	X	X	X	X	X	X
770	X	X	X	X	X	X	X
780	X	X	X	X	X	X	X
790	X	X	X	X	X	X	X
800	X	X	X	X	X	X	X
810	X	X	X	X	X	X	X
820	X	X	X	X	X	X	X
830	X	X	X	X	X	X	X
840	X	X	X	X	X	X	X
850	X	X	X	X	X	X	X
860	X	X	X	X	X	X	X
870	X	X	X	X	X	X	X
880	X	X	X	X	X	X	X
890	X	X	X	X	X	X	X
900	X	X	X	X	X	X	X
910	X	X	X	X	X	X	X
920	X	X	X	X	X	X	X
930	X	X	X	X	X	X	X
940	X	X	X	X	X	X	X
950	X	X	X	X	X	X	X
960	X	X	X	X	X	X	X
970	X	X	X	X	X	X	X
980	X	X	X	X	X	X	X
990	X	X	X	X	X	X	X
1000	X	X	X	X	X	X	X

[illegible]

	10	20	30	40	50	60
80						
90						
100						
110						
120						
130						
140						
150						

	70	80	90	100	110	120
80
90
100
110
120
130
140
150

(26)

	190	200	210	220	230	240	250
80	T	V	V	V	V	V	V
90	V	V	V	V	V	V	V
100	V	V	V	V	V	V	V
110	V	V	V	V	V	V	V
120	V	V	V	V	V	V	V
130	V	V	V	V	V	V	V
140	V	V	V	V	V	V	V
150	V	V	V	V	V	V	V

[illegible]

	310	320	330	340	350	360	370
80	X	X	X	X	X	X	X
81	X	X	X	X	X	X	X
82	X	X	X	X	X	X	X
83	X	X	X	X	X	X	X
84	X	X	X	X	X	X	X
85	X	X	X	X	X	X	X
86	X	X	X	X	X	X	X
87	X	X	X	X	X	X	X
88	X	X	X	X	X	X	X
89	X	X	X	X	X	X	X
90	X	X	X	X	X	X	X
91	X	X	X	X	X	X	X
92	X	X	X	X	X	X	X
93	X	X	X	X	X	X	X
94	X	X	X	X	X	X	X
95	X	X	X	X	X	X	X
96	X	X	X	X	X	X	X
97	X	X	X	X	X	X	X
98	X	X	X	X	X	X	X
99	X	X	X	X	X	X	X
100	X	X	X	X	X	X	X
101	X	X	X	X	X	X	X
102	X	X	X	X	X	X	X
103	X	X	X	X	X	X	X
104	X	X	X	X	X	X	X
105	X	X	X	X	X	X	X
106	X	X	X	X	X	X	X
107	X	X	X	X	X	X	X
108	X	X	X	X	X	X	X
109	X	X	X	X	X	X	X
110	X	X	X	X	X	X	X
111	X	X	X	X	X	X	X
112	X	X	X	X	X	X	X
113	X	X	X	X	X	X	X
114	X	X	X	X	X	X	X
115	X	X	X	X	X	X	X
116	X	X	X	X	X	X	X
117	X	X	X	X	X	X	X
118	X	X	X	X	X	X	X
119	X	X	X	X	X	X	X
120	X	X	X	X	X	X	X
121	X	X	X	X	X	X	X
122	X	X	X	X	X	X	X
123	X	X	X	X	X	X	X
124	X	X	X	X	X	X	X
125	X	X	X	X	X	X	X
126	X	X	X	X	X	X	X
127	X	X	X	X	X	X	X
128	X	X	X	X	X	X	X
129	X	X	X	X	X	X	X
130	X	X	X	X	X	X	X
131	X	X	X	X	X	X	X
132	X	X	X	X	X	X	X
133	X	X	X	X	X	X	X
134	X	X	X	X	X	X	X
135	X	X	X	X	X	X	X
136	X	X	X	X	X	X	X
137	X	X	X	X	X	X	X
138	X	X	X	X	X	X	X
139	X	X	X	X	X	X	X
140	X	X	X	X	X	X	X
141	X	X	X	X	X	X	X
142	X	X	X	X	X	X	X
143	X	X	X	X	X	X	X
144	X	X	X	X	X	X	X
145	X	X	X	X	X	X	X
146	X	X	X	X	X	X	X
147	X	X	X	X	X	X	X
148	X	X	X	X	X	X	X
149	X	X	X	X	X	X	X
150	X	X	X	X	X	X	X

	380	390	400	410	420	430
80						
90						
100						
110						
120						
130						
140						
150						

	440										450										460										470										480										490																																																	
80																																																																																																				
90																																																																																																				
100																																																																																																				
110																																																																																																				
120																																																																																																				
130																																																																																																				
140																																																																																																				
150																																																																																																				

	560	570	580	590	600	610	620
80							
90							
100							
110							
120							
130							
140							
150							

[illegible]

[illegible]

	70										80										90										100										110										120																																																																					
160																																																																																																																								
170																																																																																																																								
180																																																																																																																								
190																																																																																																																								
200																																																																																																																								
210																																																																																																																								
220																																																																																																																								
230																																																																																																																								

	130										140										150										160										170										180																																																	
160																																																																																																				
170																																																																																																				
180																																																																																																				
190																																																																																																				
200																																																																																																				
210																																																																																																				
220																																																																																																				
230																																																																																																				

	190	200	210	220	230	240	250
160	II	II	II	II	II	II	II
161	II	II	II	II	II	II	II
162	II	II	II	II	II	II	II
163	II	II	II	II	II	II	II
164	II	II	II	II	II	II	II
165	II	II	II	II	II	II	II
166	II	II	II	II	II	II	II
167	II	II	II	II	II	II	II
168	II	II	II	II	II	II	II
169	II	II	II	II	II	II	II
170	II	II	II	II	II	II	II
171	II	II	II	II	II	II	II
172	II	II	II	II	II	II	II
173	II	II	II	II	II	II	II
174	II	II	II	II	II	II	II
175	II	II	II	II	II	II	II
176	II	II	II	II	II	II	II
177	II	II	II	II	II	II	II
178	II	II	II	II	II	II	II
179	II	II	II	II	II	II	II
180	II	II	II	II	II	II	II
181	II	II	II	II	II	II	II
182	II	II	II	II	II	II	II
183	II	II	II	II	II	II	II
184	II	II	II	II	II	II	II
185	II	II	II	II	II	II	II
186	II	II	II	II	II	II	II
187	II	II	II	II	II	II	II
188	II	II	II	II	II	II	II
189	II	II	II	II	II	II	II
190	II	II	II	II	II	II	II
191	II	II	II	II	II	II	II
192	II	II	II	II	II	II	II
193	II	II	II	II	II	II	II
194	II	II	II	II	II	II	II
195	II	II	II	II	II	II	II
196	II	II	II	II	II	II	II
197	II	II	II	II	II	II	II
198	II	II	II	II	II	II	II
199	II	II	II	II	II	II	II
200	II	II	II	II	II	II	II
201	II	II	II	II	II	II	II
202	II	II	II	II	II	II	II
203	II	II	II	II	II	II	II
204	II	II	II	II	II	II	II
205	II	II	II	II	II	II	II
206	II	II	II	II	II	II	II
207	II	II	II	II	II	II	II
208	II	II	II	II	II	II	II
209	II	II	II	II	II	II	II
210	II	II	II	II	II	II	II
211	II	II	II	II	II	II	II
212	II	II	II	II	II	II	II
213	II	II	II	II	II	II	II
214	II	II	II	II	II	II	II
215	II	II	II	II	II	II	II
216	II	II	II	II	II	II	II
217	II	II	II	II	II	II	II
218	II	II	II	II	II	II	II
219	II	II	II	II	II	II	II
220	II	II	II	II	II	II	II
221	II	II	II	II	II	II	II
222	II	II	II	II	II	II	II
223	II	II	II	II	II	II	II
224	II	II	II	II	II	II	II
225	II	II	II	II	II	II	II
226	II	II	II	II	II	II	II
227	II	II	II	II	II	II	II
228	II	II	II	II	II	II	II
229	II	II	II	II	II	II	II
230	II	II	II	II	II	II	II
231	II	II	II	II	II	II	II
232	II	II	II	II	II	II	II
233	II	II	II	II	II	II	II
234	II	II	II	II	II	II	II
235	II	II	II	II	II	II	II
236	II	II	II	II	II	II	II
237	II	II	II	II	II	II	II
238	II	II	II	II	II	II	II
239	II	II	II	II	II	II	II
240	II	II	II	II	II	II	II
241	II	II	II	II	II	II	II
242	II	II	II	II	II	II	II
243	II	II	II	II	II	II	II
244	II	II	II	II	II	II	II
245	II	II	II	II	II	II	II
246	II	II	II	II	II	II	II
247	II	II	II	II	II	II	II
248	II	II	II	II	II	II	II
249	II	II	II	II	II	II	II
250	II	II	II	II	II	II	II

	250	260	270	280	290	300	310
160
170
180
190
200
210
220
230

	440	450	460	470	480	490
160	Y	↑	↑	↑	↑	↑
170	Y	↑	↑	↑	↑	↑
180	Y	↑	↑	↑	↑	↑
190	Y	↑	↑	↑	↑	↑
200	Y	↑	↑	↑	↑	↑
210	Y	↑	↑	↑	↑	↑
220	Y	↑	↑	↑	↑	↑
230	Y	↑	↑	↑	↑	↑

	500	510	520	530	540	550	560
160
170
180
190
200
210
220
230

	560	570	580	590	600	610	620
160
170
180
190
200
210
220
230

[illegible]

$$(45) \quad \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} f(s) ds = \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} f(s) ds + \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} f(s) ds$$

	70	80	90	100	110	120
240	T	T	T	T	T	T
250	T	T	T	T	T	T
260	T	T	T	T	T	T
270	T	T	T	T	T	T
280	T	T	T	T	T	T
290	T	T	T	T	T	T
300	T	T	T	T	T	T
310	T	T	T	T	T	T

[illegible]

	190	200	210	220	230	240	250
240							
250							
260							
270							
280							
290							
300							
310							

	250	260	270	280	290	300	310
240							
250							
260							
270							
280							
290							
300							
310							

310	320	330	340	350	360	370
240	250	260	270	280	290	300
310	320	330	340	350	360	370

	380	390	400	410	420	430
240						
250						
260						
270						
280						
290						
300						
310						

[illegible]

	500	510	520	530	540	550	560
240
250
260
270
280
290
300
310

	560	570	580	590	600	610	620
240							
250							
260							
270							
280							
290							
300							
310							

[illegible]

	10	20	30	40	50	60
310	##	##	##	##	##	##
320	##	##	##	##	##	##
330	##	##	##	##	##	##
340	##	##	##	##	##	##
350	##	##	##	##	##	##
360	##	##	##	##	##	##
370	##	##	##	##	##	##
380	##	##	##	##	##	##

	130	140	150	160	170	180
310	T	Q	Q	Q	Q	Q
320	Q	Q	Q	Q	Q	Q
330	Q	Q	Q	Q	Q	Q
340	Q	Q	Q	Q	Q	Q
350	Q	Q	Q	Q	Q	Q
360	Q	Q	Q	Q	Q	Q
370	Q	Q	Q	Q	Q	Q
380	Q	Q	Q	Q	Q	Q

	190	200	210	220	230	240	250
310	C	C	T	C	C	C	C
320	C	C	T	C	C	C	C
330	C	C	T	C	C	C	C
340	C	C	T	C	C	C	C
350	C	C	T	C	C	C	C
360	C	C	T	C	C	C	C
370	C	C	T	C	C	C	C
380	C	C	T	C	C	C	C
390	C	C	T	C	C	C	C
400	C	C	T	C	C	C	C
410	C	C	T	C	C	C	C
420	C	C	T	C	C	C	C
430	C	C	T	C	C	C	C
440	C	C	T	C	C	C	C
450	C	C	T	C	C	C	C
460	C	C	T	C	C	C	C
470	C	C	T	C	C	C	C
480	C	C	T	C	C	C	C
490	C	C	T	C	C	C	C
500	C	C	T	C	C	C	C
510	C	C	T	C	C	C	C
520	C	C	T	C	C	C	C
530	C	C	T	C	C	C	C
540	C	C	T	C	C	C	C
550	C	C	T	C	C	C	C
560	C	C	T	C	C	C	C
570	C	C	T	C	C	C	C
580	C	C	T	C	C	C	C
590	C	C	T	C	C	C	C
600	C	C	T	C	C	C	C
610	C	C	T	C	C	C	C
620	C	C	T	C	C	C	C
630	C	C	T	C	C	C	C
640	C	C	T	C	C	C	C
650	C	C	T	C	C	C	C
660	C	C	T	C	C	C	C
670	C	C	T	C	C	C	C
680	C	C	T	C	C	C	C
690	C	C	T	C	C	C	C
700	C	C	T	C	C	C	C
710	C	C	T	C	C	C	C
720	C	C	T	C	C	C	C
730	C	C	T	C	C	C	C
740	C	C	T	C	C	C	C
750	C	C	T	C	C	C	C
760	C	C	T	C	C	C	C
770	C	C	T	C	C	C	C
780	C	C	T	C	C	C	C
790	C	C	T	C	C	C	C
800	C	C	T	C	C	C	C
810	C	C	T	C	C	C	C
820	C	C	T	C	C	C	C
830	C	C	T	C	C	C	C
840	C	C	T	C	C	C	C
850	C	C	T	C	C	C	C
860	C	C	T	C	C	C	C
870	C	C	T	C	C	C	C
880	C	C	T	C	C	C	C
890	C	C	T	C	C	C	C
900	C	C	T	C	C	C	C
910	C	C	T	C	C	C	C
920	C	C	T	C	C	C	C
930	C	C	T	C	C	C	C
940	C	C	T	C	C	C	C
950	C	C	T	C	C	C	C
960	C	C	T	C	C	C	C
970	C	C	T	C	C	C	C
980	C	C	T	C	C	C	C
990	C	C	T	C	C	C	C
1000	C	C	T	C	C	C	C

$$(60) \quad \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} f(s) ds = \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} f(s) ds + \frac{1}{\Gamma(\alpha)} \int_t^\infty (t-s)^{\alpha-1} f(s) ds$$

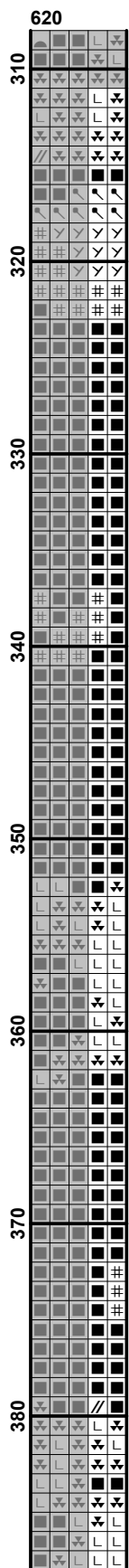
	310	320	330	340	350	360	370
310	⬤	⬤	⬤	⬤	⬤	⬤	⬤
320	⬤	⬤	⬤	⬤	⬤	⬤	⬤
330	⬤	⬤	⬤	⬤	⬤	⬤	⬤
340	⬤	⬤	⬤	⬤	⬤	⬤	⬤
350	⬤	⬤	⬤	⬤	⬤	⬤	⬤
360	⬤	⬤	⬤	⬤	⬤	⬤	⬤
370	⬤	⬤	⬤	⬤	⬤	⬤	⬤
380	⬤	⬤	⬤	⬤	⬤	⬤	⬤

[illegible]

$$(63) \quad \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} f(s) ds = \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} g(s) ds + \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} h(s) ds$$

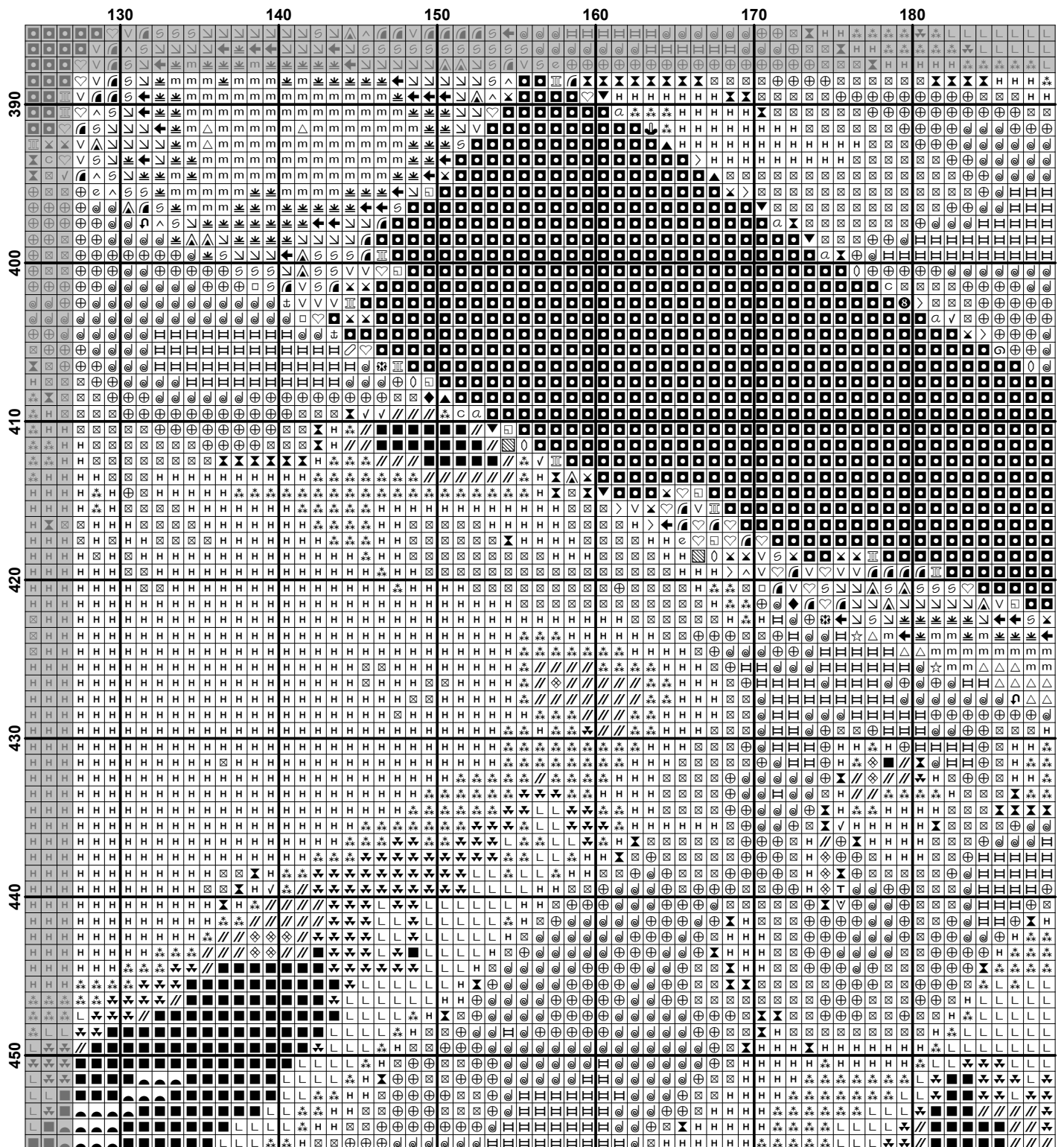
	500	510	520	530	540	550	560
310	♣	♣	♣	♣	♣	♣	♣
320	♣	♣	♣	♣	♣	♣	♣
330	♣	♣	♣	♣	♣	♣	♣
340	♣	♣	♣	♣	♣	♣	♣
350	♣	♣	♣	♣	♣	♣	♣
360	♣	♣	♣	♣	♣	♣	♣
370	♣	♣	♣	♣	♣	♣	♣
380	♣	♣	♣	♣	♣	♣	♣

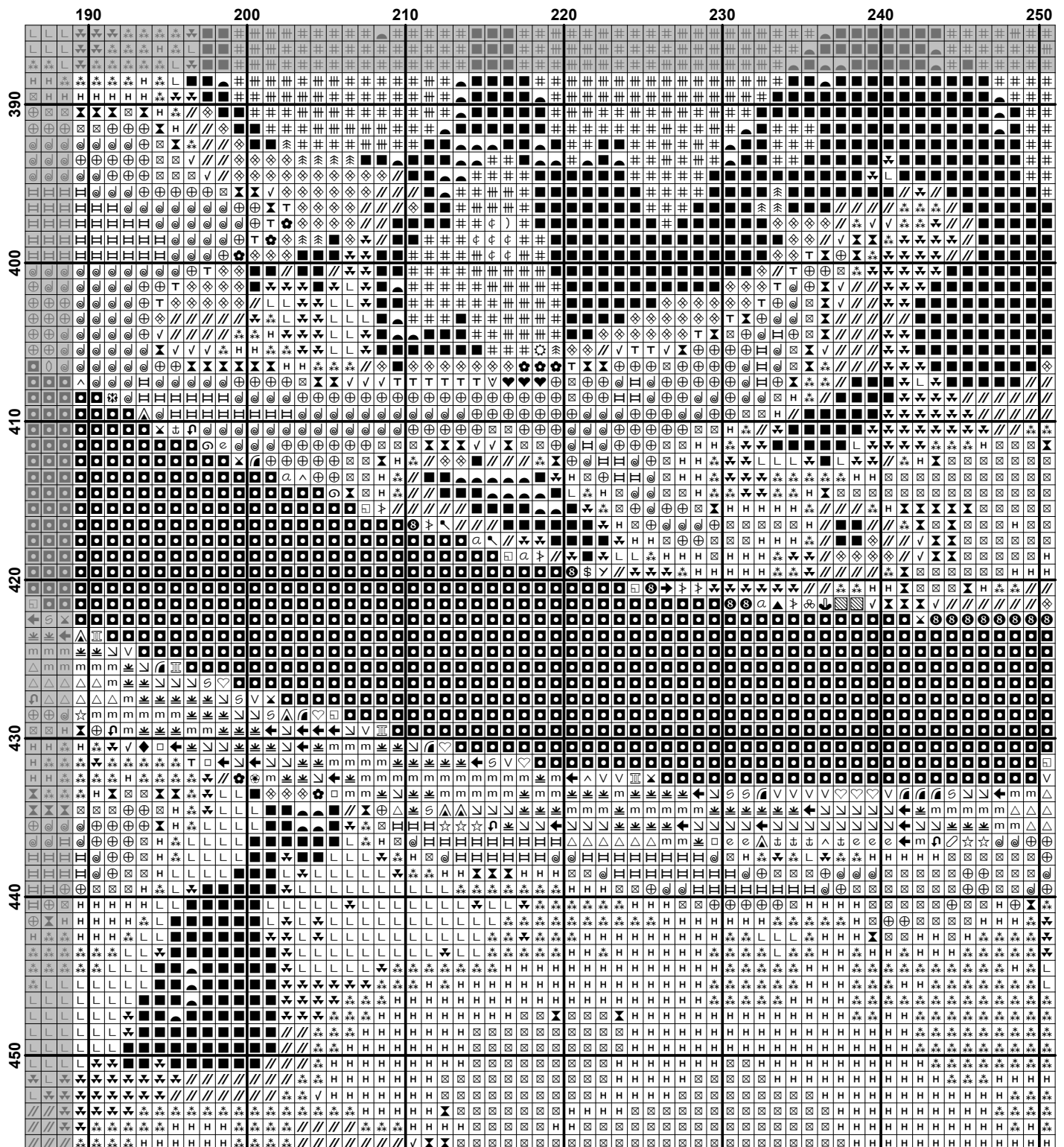
	560	570	580	590	600	610	620
310							
320							
330							
340							
350							
360							
370							
380							



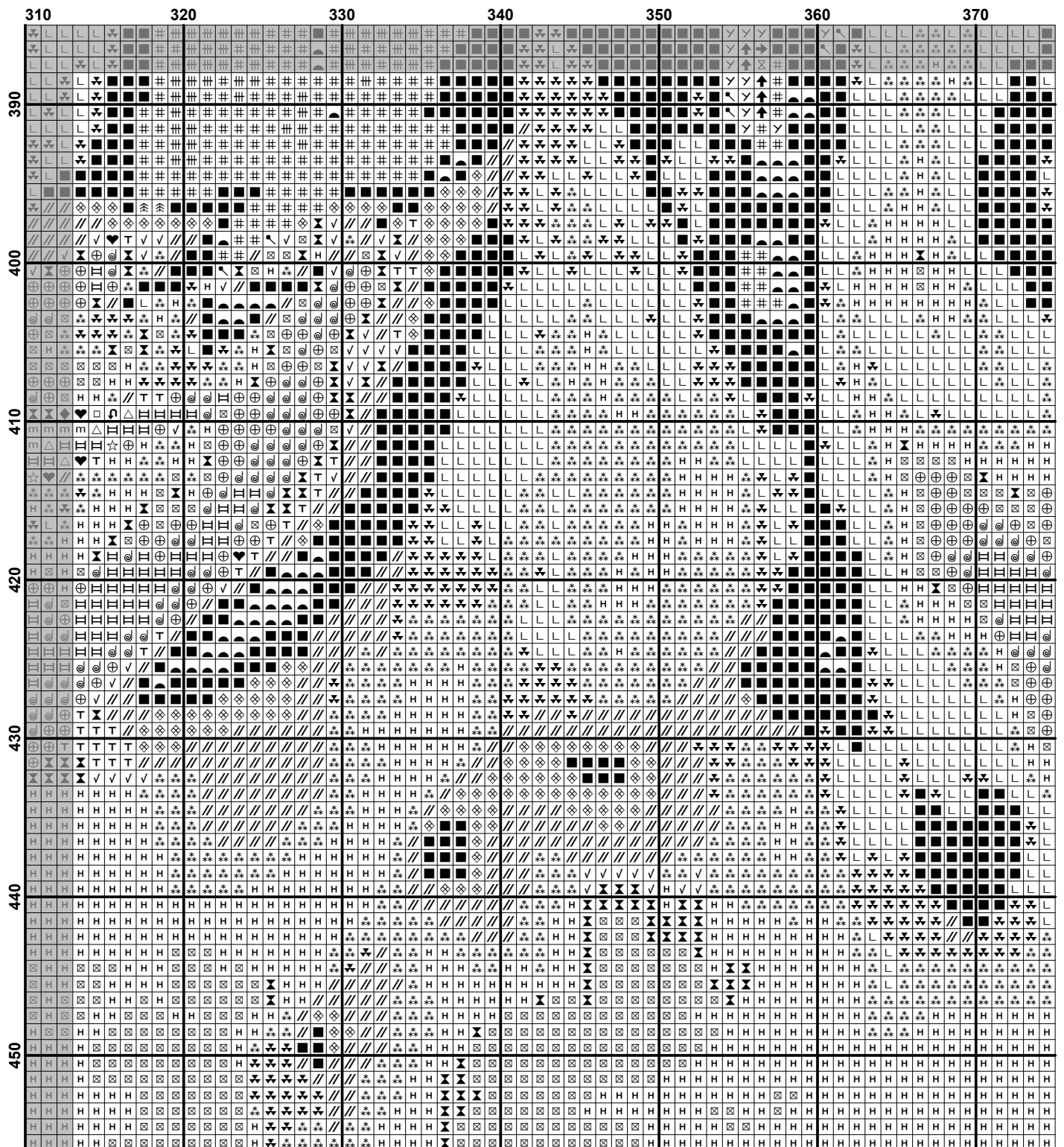
[illegible]

	70										80										90										100										110										120																																																																					
390																																																																																																																								
400																																																																																																																								
410																																																																																																																								
420																																																																																																																								
430																																																																																																																								
440																																																																																																																								
450																																																																																																																								

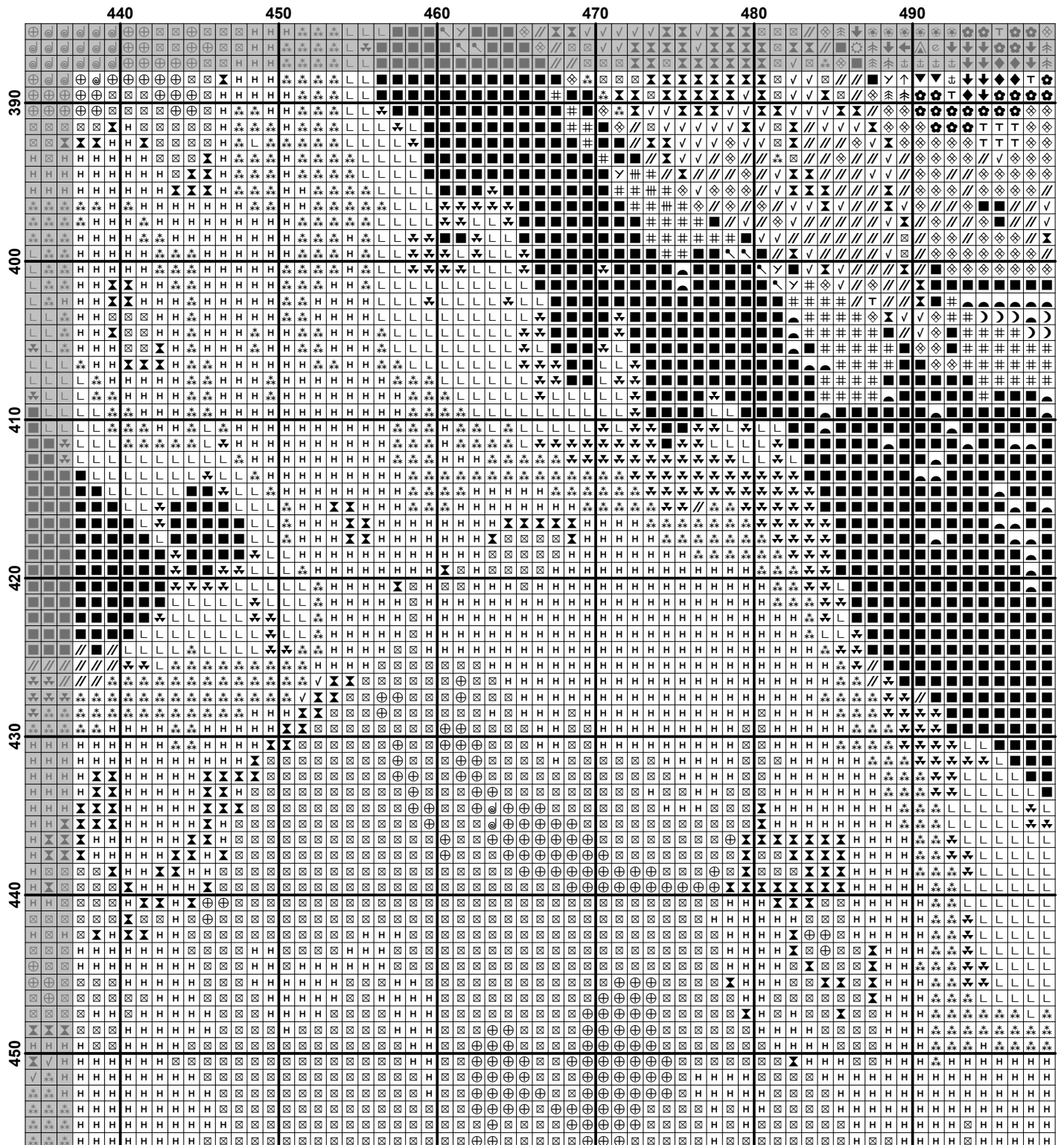


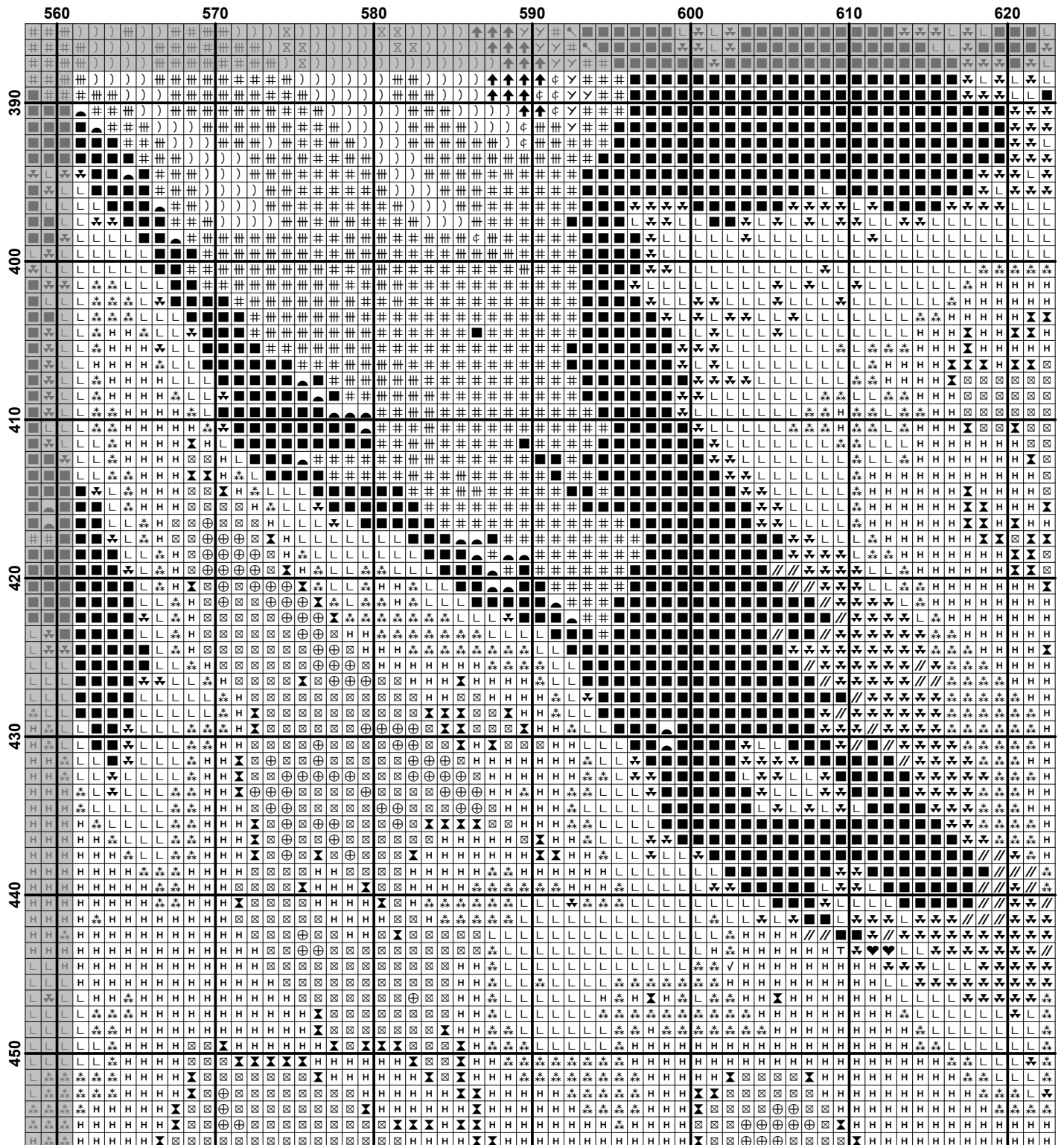


	250	260	270	280	290	300	310
390	#	#	#	#	#	#	#
400	#	#	#	#	#	#	#
410	#	#	#	#	#	#	#
420	#	#	#	#	#	#	#
430	#	#	#	#	#	#	#
440	#	#	#	#	#	#	#
450	#	#	#	#	#	#	#



[illegible]





[illegible]