

1911 The Rose of all Roses (small)



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Instructions

Thank you for choosing Golden Kite products!
We hope you will have lots of fun with this cross-stitch pattern!

Fabric

Press the fabric with an iron if needed. A good thing to prevent the fabric from fraying is to machine zigzag the edges.

On large patterns, it is easiest to start from the upper left corner of the design. Make sure you have the proper margins before starting and that the fabric piece is of the correct size. The best way to verify this is to count all stitch positions on the fabric from the upper left corner downwards and to the right to make sure there is enough space for the design.

Some prefer to start in the center of the design instead. To locate the center of the fabric, fold the fabric in half both vertically and horizontally. The center is located where these two folds meet.

Stitches

Each length of DMC tread consists of six strands.
Use two of these strands for all stitches.

Note that some colors may be mixes (or blends) between two different pure colors. In that case take one strand of the two colors each and thread the two strands into the needle at the same time for stitching.

All stitches are full cross-stitches. No half-stitching and no back-stitching is necessary in this pattern.

All cross-stitches will be worked into the holes in the fabric from left to right. Always use the larger holes in the fabric for the stitches. Adjacent stitches should meet in the same hole. Make sure all stitches cross in the same direction.

Please be careful when washing the finished embroidery! The cotton thread may bleed when washed. Only hand wash it in lukewarm water. Remove excess water by roll it in a towel and lay it flat to air dry. Natural fabrics may shrink slightly when washed. We do not recommend washing the embroidery if not absolutely necessary and we take no responsibility for any damage that may occur.

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The Rose of all Roses (small)

Stitch Count	
Horizontal:	320
Vertical:	454

Recommended Fabric Color
Antique White.

This table tells the size of the pattern (without any margins) and the size of the fabric required to stitch the pattern (including recommended margins). 3 inch margins have been added on each side in the 'Including Margins' row.

The sizes are given for 14, 16 and 18 stitches per inch fabrics.

Make sure to use the 'Including Margins' row when cutting the piece of fabric to be used. Also make sure that 3 inch margins are enough for your stitching technique and add more margin areas if necessary.

	14				16				18			
	Width		Height		Width		Height		Width		Height	
	cm	inch	cm	inch	cm	inch	cm	inch	cm	inch	cm	inch
Pattern:	58	22,82	83	32,3	51	19,96	72	28,26	46	17,75	64	25,125
Including Margins:	74	29	99	39	67	26	88	35	62	24	80	32
	10				12				24			
	Width		Height		Width		Height		Width		Height	
	cm	inch	cm	inch	cm	inch	cm	inch	cm	inch	cm	inch
Pattern:	81	31,94	116	45,22	67	26,62	96	37,68	33	13,31	48	18,84
Including Margins:	97	38	132	52	83	33	112	44	49	20	64	25
	25				26				27			
	Width		Height		Width		Height		Width		Height	
	cm	inch	cm	inch	cm	inch	cm	inch	cm	inch	cm	inch
Pattern:	32	12,77	46	18,08	31	12,28	44	17,39	30	11,83	43	16,74
Including Margins:	48	19	62	25	47	19	60	24	46	18	59	23
	28				30				32			
	Width		Height		Width		Height		Width		Height	
	cm	inch	cm	inch	cm	inch	cm	inch	cm	inch	cm	inch
Pattern:	29	11,41	41	16,15	27	10,64	38	15,07	25	9,98	36	14,13
Including Margins:	45	18	57	23	43	17	54	22	41	16	52	21

Solid Color Stitches. Use two strands of the specified color for these stitches.

Symbol	DMC	Name
	319	Pistachio Green-VY DK
	356	Terra Cotta-MD
	370	Mustard-MD
	413	Pewter Gray-DK
	420	Hazelnut Brown-DK
	422	Hazelnut Brown-LT
	437	Tan-LT
	452	Shell Gray-MD
	503	Blue Green-MD
	520	Fern Green-DK
	522	Fern Green
	523	Fern Green-LT
	524	Fern Green-VY LT
	535	Ash Gray-VY LT
	563	Jade-LT
	610	Drab Brown-DK
	611	Drab Brown
	613	Drab Brown-VY LT
	632	Desert Sand-UL VY DK
	640	Beige Gray-VY DK
	642	Beige Gray-DK
	645	Beaver Gray-VY DK
	646	Beaver Gray-DK
	647	Beaver Gray-MD
	648	Beaver Gray-LT
	680	Old Gold-DK
	712	Cream
	730	Olive Green-VY DK
	732	Olive Green
	738	Tan-VY LT
	739	Tan-UL VY LT
	829	Golden Olive-VY DK
	833	Golden Olive-LT
	834	Golden Olive-VY LT
	898	Coffee Brown-VY DK
	920	Copper-MD
	926	Gray Green-MD
	927	Gray Green-LT
	934	Black Avocado Green
	935	Avocado Green-DK
	936	Avocado Green-VY DK
	937	Avocado Green-MD
	938	Coffee Brown-UL DK
	987	Forest Green-DK
	988	Forest Green-MD
	3011	Khaki Green-DK
	3012	Khaki Green-MD
	3021	Brown Gray-VY DK
	3022	Brown Gray-MD
	3024	Brown Gray-VY LT
	3032	Mocha Brown-MD
	3045	Yellow Beige-DK
	3052	Green Gray-MD

::	3053	Green Gray
△	3064	Desert Sand
↑	3072	Beaver Gray-VY LT
●	3346	Hunter Green
▨	3362	Pine Green-DK
■	3363	Pine Green-MD
○	3756	Baby Blue-UL VY LT
*	3772	Desert Sand-VY DK
•	3774	Desert Sand-VY LT
◇	3776	Mahogany-LT
↑	3778	Terra Cotta-LT
↓	3781	Mocha Brown-DK
√	3782	Mocha Brown-LT
◀	3787	Brown Gray-DK
☛	3799	Pewter Gray-VY DK
▼	3815	Celadon Green-DK
⊕	3826	Golden Brown
✦	3830	Terra Cotta-MD
✕	3857	Rosewood-DK
↻	3859	Rosewood-LT
⚙	3860	Cocoa
☾	3862	Mocha Beige-DK
u	3865	Winter White
o	3866	Mocha Brown-UL VY LT

Blend Stitches. Use one strand of each of DMC1 and DMC2 for these stitches.				
Symbol	DMC1	Name1	DMC2	Name2
↘	223	Shell Pink-LT	3032	Mocha Brown-MD
◇	223	Shell Pink-LT	3864	Mocha Beige-LT
←	300	Mahogany-VY DK	829	Golden Olive-VY DK
⬇	317	Pewter Gray	926	Gray Green-MD
≡	318	Steel Gray-LT	415	Pearl Gray
▢	318	Steel Gray-LT	928	Gray Green-VY LT
≡	320	Pistachio Green-MD	502	Blue Green
z	320	Pistachio Green-MD	3815	Celadon Green-DK
(353	Peach	543	Beige Brown-UL VY LT
^	356	Terra Cotta-MD	3828	Hazelnut Brown
▣	367	Pistachio Green-DK	520	Fern Green-DK
●	367	Pistachio Green-DK	535	Ash Gray-VY LT
	370	Mustard-MD	612	Drab Brown-LT
×	371	Mustard	420	Hazelnut Brown-DK
⊥	371	Mustard	611	Drab Brown
○	371	Mustard	833	Golden Olive-LT
+	372	Mustard-LT	612	Drab Brown-LT
•	372	Mustard-LT	642	Beige Gray-DK
⊥	372	Mustard-LT	3064	Desert Sand
⋈	407	Desert Sand-DK	524	Fern Green-VY LT
9	407	Desert Sand-DK	3856	Mahogany-UL VY LT
⬆	413	Pewter Gray-DK	520	Fern Green-DK
⌘	414	Steel Gray-DK	503	Blue Green-MD
⌘	414	Steel Gray-DK	647	Beaver Gray-MD
⌘	414	Steel Gray-DK	927	Gray Green-LT
⇐	415	Pearl Gray	928	Gray Green-VY LT

✚	420	Hazelnut Brown-DK	829	Golden Olive-VY DK
✚	420	Hazelnut Brown-DK	830	Golden Olive-DK
✚	420	Hazelnut Brown-DK	3772	Desert Sand-VY DK
6	422	Hazelnut Brown-LT	738	Tan-VY LT
◁	422	Hazelnut Brown-LT	3045	Yellow Beige-DK
◇	422	Hazelnut Brown-LT	3782	Mocha Brown-LT
☆	437	Tan-LT	3064	Desert Sand
5	452	Shell Gray-MD	524	Fern Green-VY LT
7	452	Shell Gray-MD	927	Gray Green-LT
e	452	Shell Gray-MD	928	Gray Green-VY LT
∩	502	Blue Green	522	Fern Green
◊	502	Blue Green	645	Beaver Gray-VY DK
◊	502	Blue Green	3815	Celadon Green-DK
×	503	Blue Green-MD	522	Fern Green
✓	503	Blue Green-MD	647	Beaver Gray-MD
⋈	520	Fern Green-DK	935	Avocado Green-DK
►	520	Fern Green-DK	3346	Hunter Green
■	520	Fern Green-DK	3799	Pewter Gray-VY DK
▣	522	Fern Green	645	Beaver Gray-VY DK
c	524	Fern Green-VY LT	564	Jade-VY LT
◄◄	524	Fern Green-VY LT	647	Beaver Gray-MD
β	524	Fern Green-VY LT	738	Tan-VY LT
:	524	Fern Green-VY LT	3856	Mahogany-UL VY LT
♦♦	535	Ash Gray-VY LT	926	Gray Green-MD
◐	535	Ash Gray-VY LT	3768	Gray Green-DK
♣	610	Drab Brown-DK	3362	Pine Green-DK
♣	610	Drab Brown-DK	3781	Mocha Brown-DK
♠	611	Drab Brown	3011	Khaki Green-DK
♠	611	Drab Brown	3346	Hunter Green
٪	611	Drab Brown	3347	Yellow Green-MD
★	611	Drab Brown	3787	Brown Gray-DK
◎	612	Drab Brown-LT	640	Beige Gray-VY DK
‡	612	Drab Brown-LT	3032	Mocha Brown-MD
✂	612	Drab Brown-LT	3772	Desert Sand-VY DK
∨	612	Drab Brown-LT	3859	Rosewood-LT
▷	613	Drab Brown-VY LT	739	Tan-UL VY LT
*	632	Desert Sand-UL VY DK	3830	Terra Cotta-MD
♠	640	Beige Gray-VY DK	645	Beaver Gray-VY DK
♠	640	Beige Gray-VY DK	3363	Pine Green-MD
III	642	Beige Gray-DK	3022	Brown Gray-MD
♠	647	Beaver Gray-MD	927	Gray Green-LT
○	648	Beaver Gray-LT	3024	Brown Gray-VY LT
<	677	Old Gold-VY LT	738	Tan-VY LT
..	680	Old Gold-DK	833	Golden Olive-LT
∞	712	Cream	762	Pearl Gray-VY LT
1	712	Cream	3865	Winter White
◊	729	Old Gold-MD	3820	Straw-DK
♡	739	Tan-UL VY LT	842	Beige Brown-VY LT
^	739	Tan-UL VY LT	3078	Golden Yellow-VY LT
>	745	Yellow-LT Pale	3046	Yellow Beige-MD
◄	746	Off White	3823	Yellow-UL Pale
?	758	Terra Cotta-VY LT	3778	Terra Cotta-LT
+	830	Golden Olive-DK	975	Golden Brown-DK
●	830	Golden Olive-DK	3011	Khaki Green-DK
▲	830	Golden Olive-DK	3346	Hunter Green
◻	831	Golden Olive-MD	832	Golden Olive
◆	838	Beige Brown-VY DK	3857	Rosewood-DK
♣	839	Beige Brown-DK	3362	Pine Green-DK
↑	898	Coffee Brown-VY DK	936	Avocado Green-VY DK

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☒	898	Coffee Brown-VY DK	3781	Mocha Brown-DK
☒	920	Copper-MD	975	Golden Brown-DK
❖	920	Copper-MD	3772	Desert Sand-VY DK
⦿	926	Gray Green-MD	3041	Antique Violet-MD
⦿	934	Black Avocado Green	935	Avocado Green-DK
●	934	Black Avocado Green	3031	Mocha Brown-VY DK
☾	935	Avocado Green-DK	936	Avocado Green-VY DK
☼	935	Avocado Green-DK	3031	Mocha Brown-VY DK
■	935	Avocado Green-DK	3371	Black Brown
☾	936	Avocado Green-VY DK	3781	Mocha Brown-DK
~	948	Peach-VY LT	3823	Yellow-UL Pale
⊕	950	Desert Sand-LT	3782	Mocha Brown-LT
⊕	950	Desert Sand-LT	3864	Mocha Beige-LT
☒	975	Golden Brown-DK	3772	Desert Sand-VY DK
☒	987	Forest Green-DK	3363	Pine Green-MD
⊕	988	Forest Green-MD	3346	Hunter Green
☒	3011	Khaki Green-DK	3051	Green Gray-DK
☒	3011	Khaki Green-DK	3346	Hunter Green
☒	3011	Khaki Green-DK	3781	Mocha Brown-DK
)	3024	Brown Gray-VY LT	3072	Beaver Gray-VY LT
●	3032	Mocha Brown-MD	3790	Beige Gray-UL DK
■	3051	Green Gray-DK	3346	Hunter Green
☒	3051	Green Gray-DK	3781	Mocha Brown-DK
2	3064	Desert Sand	3778	Terra Cotta-LT
m	3064	Desert Sand	3782	Mocha Brown-LT
	3072	Beaver Gray-VY LT	3774	Desert Sand-VY LT
=	3346	Hunter Green	3362	Pine Green-DK
☒	3346	Hunter Green	3787	Brown Gray-DK
☒	3363	Pine Green-MD	3790	Beige Gray-UL DK
☒	3772	Desert Sand-VY DK	3828	Hazelnut Brown
L	3772	Desert Sand-VY DK	3830	Terra Cotta-MD
◀	3776	Mahogany-LT	3830	Terra Cotta-MD
☒	3787	Brown Gray-DK	3834	Grape-DK
☒	3787	Brown Gray-DK	3862	Mocha Beige-DK
☒	3862	Mocha Beige-DK	3863	Mocha Beige-MD

This table specifies how much thread of each color is required to stitch this pattern. It is good to know that one complete DMC skein contains 313 inches (795 cm) thread.

DMC	Name	Usage (cm)	Usage (inch)	Usage (cm)	Usage (inch)	Usage (cm)	Usage (inch)
		14		16		18	
223	Shell Pink-LT	29	11	28	11	25	9
300	Mahogany-VY DK	21	8	20	7	18	7
317	Pewter Gray	11	4	11	4	10	3
318	Steel Gray-LT	155	61	147	57	133	52
319	Pistachio Green-VY DK	94	37	90	35	81	31
320	Pistachio Green-MD	55	21	52	20	47	18
353	Peach	5	1	5	1	4	1
356	Terra Cotta-MD	17	6	16	6	15	5
367	Pistachio Green-DK	215	84	205	80	184	72
370	Mustard-MD	228	89	217	85	195	76
371	Mustard	269	105	257	101	231	90
372	Mustard-LT	277	109	264	103	237	93
407	Desert Sand-DK	88	34	83	32	75	29
413	Pewter Gray-DK	90	35	85	33	77	30
414	Steel Gray-DK	160	62	152	59	137	53
415	Pearl Gray	242	95	231	90	208	81
420	Hazelnut Brown-DK	209	82	199	78	179	70
422	Hazelnut Brown-LT	115	45	110	43	99	38
437	Tan-LT	7	2	7	2	6	2
452	Shell Gray-MD	349	137	333	131	300	118
502	Blue Green	331	130	315	124	284	111
503	Blue Green-MD	289	113	276	108	248	97
520	Fern Green-DK	1096	431	1044	411	940	370
522	Fern Green	636	250	606	238	545	214
523	Fern Green-LT	111	43	106	41	96	37
524	Fern Green-VY LT	741	291	706	277	635	250
535	Ash Gray-VY LT	224	88	213	83	192	75
543	Beige Brown-UL VY LT	5	1	5	1	4	1
563	Jade-LT	7	2	7	2	6	2
564	Jade-VY LT	58	22	55	21	49	19
610	Drab Brown-DK	894	351	852	335	766	301
611	Drab Brown	2608	1026	2483	977	2235	879
612	Drab Brown-LT	824	324	785	309	707	278
613	Drab Brown-VY LT	226	88	216	85	194	76
632	Desert Sand-UL VY DK	47	18	45	17	40	15
640	Beige Gray-VY DK	1398	550	1331	524	1198	471
642	Beige Gray-DK	1278	503	1217	479	1095	431
645	Beaver Gray-VY DK	717	282	683	268	614	241
646	Beaver Gray-DK	275	108	262	103	236	92
647	Beaver Gray-MD	954	375	909	357	818	322
648	Beaver Gray-LT	716	281	682	268	613	241
677	Old Gold-VY LT	14	5	14	5	12	4
680	Old Gold-DK	21	8	20	7	18	7
712	Cream	159	62	151	59	136	53
729	Old Gold-MD	3	1	3	1	2	1
730	Olive Green-VY DK	119	46	113	44	102	40
732	Olive Green	100	39	96	37	86	33
738	Tan-VY LT	166	65	158	62	142	55
739	Tan-UL VY LT	116	45	111	43	100	39
745	Yellow-LT Pale	4	1	4	1	3	1
746	Off White	9	3	9	3	8	3
758	Terra Cotta-VY LT	3	1	3	1	2	1
762	Pearl Gray-VY LT	67	26	64	25	57	22

829	Golden Olive-VY DK	140	55	133	52	120	47
830	Golden Olive-DK	462	181	440	173	396	155
831	Golden Olive-MD	25	9	24	9	22	8
832	Golden Olive	25	9	24	9	22	8
833	Golden Olive-LT	60	23	57	22	51	20
834	Golden Olive-VY LT	6	2	6	2	6	2
838	Beige Brown-VY DK	7	2	7	2	6	2
839	Beige Brown-DK	220	86	210	82	189	74
842	Beige Brown-VY LT	29	11	28	11	25	9
898	Coffee Brown-VY DK	402	158	383	150	344	135
920	Copper-MD	17	6	16	6	15	5
926	Gray Green-MD	146	57	139	54	125	49
927	Gray Green-LT	440	173	419	164	377	148
928	Gray Green-VY LT	421	165	401	157	361	142
934	Black Avocado Green	329	129	313	123	282	111
935	Avocado Green-DK	1113	438	1060	417	954	375
936	Avocado Green-VY DK	904	355	861	338	775	305
937	Avocado Green-MD	298	117	284	111	255	100
938	Coffee Brown-UL DK	134	52	127	50	115	45
948	Peach-VY LT	13	5	13	5	12	4
950	Desert Sand-LT	58	22	56	22	50	19
975	Golden Brown-DK	49	19	47	18	42	16
987	Forest Green-DK	225	88	214	84	193	75
988	Forest Green-MD	49	19	47	18	42	16
3011	Khaki Green-DK	2581	1016	2458	967	2212	870
3012	Khaki Green-MD	360	141	343	135	309	121
3021	Brown Gray-VY DK	244	96	233	91	210	82
3022	Brown Gray-MD	959	377	914	359	822	323
3024	Brown Gray-VY LT	630	248	600	236	540	212
3031	Mocha Brown-VY DK	336	132	320	125	288	113
3032	Mocha Brown-MD	1205	474	1147	451	1033	406
3041	Antique Violet-MD	14	5	13	5	12	4
3045	Yellow Beige-DK	77	30	74	29	66	25
3046	Yellow Beige-MD	4	1	4	1	3	1
3051	Green Gray-DK	877	345	835	328	752	296
3052	Green Gray-MD	682	268	649	255	584	229
3053	Green Gray	161	63	154	60	138	54
3064	Desert Sand	59	23	57	22	51	20
3072	Beaver Gray-VY LT	451	177	429	168	386	151
3078	Golden Yellow-VY LT	8	3	8	3	7	2
3346	Hunter Green	1733	682	1651	650	1486	585
3347	Yellow Green-MD	153	60	146	57	132	51
3362	Pine Green-DK	1170	460	1114	438	1003	394
3363	Pine Green-MD	1441	567	1372	540	1235	486
3371	Black Brown	82	32	78	30	70	27
3756	Baby Blue-UL VY LT	13	5	12	4	11	4
3768	Gray Green-DK	13	5	12	4	11	4
3772	Desert Sand-VY DK	110	43	105	41	94	37
3774	Desert Sand-VY LT	100	39	96	37	86	33
3776	Mahogany-LT	10	3	9	3	8	3
3778	Terra Cotta-LT	10	3	10	3	9	3
3781	Mocha Brown-DK	1354	533	1290	507	1161	457
3782	Mocha Brown-LT	429	168	408	160	367	144
3787	Brown Gray-DK	1440	566	1372	540	1235	486
3790	Beige Gray-UL DK	909	357	866	340	780	307
3799	Pewter Gray-VY DK	144	56	138	54	124	48
3815	Celadon Green-DK	55	21	53	20	48	18
3820	Straw-DK	3	1	3	1	2	1
3823	Yellow-UL Pale	22	8	21	8	19	7

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3826	Golden Brown	5	1	5	1	4	1
3828	Hazelnut Brown	18	7	17	6	15	5
3830	Terra Cotta-MD	31	12	30	11	27	10
3834	Grape-DK	2	1	2	1	2	1
3856	Mahogany-UL VY LT	38	14	37	14	33	12
3857	Rosewood-DK	21	8	20	7	18	7
3859	Rosewood-LT	31	12	30	11	27	10
3860	Cocoa	11	4	10	3	9	3
3862	Mocha Beige-DK	357	140	340	133	306	120
3863	Mocha Beige-MD	53	20	50	19	45	17
3864	Mocha Beige-LT	30	11	28	11	25	9
3865	Winter White	34	13	33	12	30	11
3866	Mocha Brown-UL VY LT	166	65	158	62	142	55

Extended thread usage table.							
DMC	Name	Usage (cm)	Usage (inch)	Usage (cm)	Usage (inch)	Usage (cm)	Usage (inch)
		10		12		24	
223	Shell Pink-LT	45	16	38	14	19	7
300	Mahogany-VY DK	32	13	27	11	14	5
317	Pewter Gray	18	5	15	5	8	2
318	Steel Gray-LT	239	94	200	78	100	39
319	Pistachio Green-VY DK	146	56	122	47	61	23
320	Pistachio Green-MD	85	32	71	27	35	14
353	Peach	7	2	6	2	3	1
356	Terra Cotta-MD	27	9	23	8	11	4
367	Pistachio Green-DK	331	130	276	108	138	54
370	Mustard-MD	351	137	293	114	146	57
371	Mustard	416	162	347	135	173	68
372	Mustard-LT	427	167	356	140	178	70
407	Desert Sand-DK	135	52	113	44	56	22
413	Pewter Gray-DK	139	54	116	45	58	23
414	Steel Gray-DK	247	95	206	80	103	40
415	Pearl Gray	374	146	312	122	156	61
420	Hazelnut Brown-DK	322	126	269	105	134	53
422	Hazelnut Brown-LT	178	68	149	57	74	29
437	Tan-LT	11	4	9	3	5	2
452	Shell Gray-MD	540	212	450	177	225	89
502	Blue Green	511	200	426	167	213	83
503	Blue Green-MD	446	175	372	146	186	73
520	Fern Green-DK	1692	666	1410	555	705	278
522	Fern Green	981	385	818	321	409	161
523	Fern Green-LT	173	67	144	56	72	28
524	Fern Green-VY LT	1143	450	953	375	476	188
535	Ash Gray-VY LT	346	135	288	113	144	56
543	Beige Brown-UL VY LT	7	2	6	2	3	1
563	Jade-LT	11	4	9	3	5	2
564	Jade-VY LT	88	34	74	29	37	14
610	Drab Brown-DK	1379	542	1149	452	575	226
611	Drab Brown	4023	1582	3353	1319	1676	659
612	Drab Brown-LT	1273	500	1061	417	530	209
613	Drab Brown-VY LT	349	137	291	114	146	57
632	Desert Sand-UL VY DK	72	27	60	23	30	11
640	Beige Gray-VY DK	2156	848	1797	707	899	353
642	Beige Gray-DK	1971	776	1643	647	821	323
645	Beaver Gray-VY DK	1105	434	921	362	461	181
646	Beaver Gray-DK	425	166	354	138	177	69

647	Beaver Gray-MD	1472	580	1227	483	614	242
648	Beaver Gray-LT	1103	434	920	362	460	181
677	Old Gold-VY LT	22	7	18	6	9	3
680	Old Gold-DK	32	13	27	11	14	5
712	Cream	245	95	204	80	102	40
729	Old Gold-MD	4	2	3	2	2	1
730	Olive Green-VY DK	184	72	153	60	77	30
732	Olive Green	155	59	129	50	65	25
738	Tan-VY LT	256	99	213	83	107	41
739	Tan-UL VY LT	180	70	150	59	75	29
745	Yellow-LT Pale	5	2	5	2	2	1
746	Off White	14	5	12	5	6	2
758	Terra Cotta-VY LT	4	2	3	2	2	1
762	Pearl Gray-VY LT	103	40	86	33	43	17
829	Golden Olive-VY DK	216	85	180	71	90	35
830	Golden Olive-DK	713	279	594	233	297	116
831	Golden Olive-MD	40	14	33	12	17	6
832	Golden Olive	40	14	33	12	17	6
833	Golden Olive-LT	92	36	77	30	38	15
834	Golden Olive-VY LT	11	4	9	3	5	2
838	Beige Brown-VY DK	11	4	9	3	5	2
839	Beige Brown-DK	340	133	284	111	142	56
842	Beige Brown-VY LT	45	16	38	14	19	7
898	Coffee Brown-VY DK	619	243	516	203	258	101
920	Copper-MD	27	9	23	8	11	4
926	Gray Green-MD	225	88	188	74	94	37
927	Gray Green-LT	679	266	566	222	283	111
928	Gray Green-VY LT	650	256	542	213	271	107
934	Black Avocado Green	508	200	423	167	212	83
935	Avocado Green-DK	1717	675	1431	563	716	281
936	Avocado Green-VY DK	1395	549	1163	458	581	229
937	Avocado Green-MD	459	180	383	150	191	75
938	Coffee Brown-UL DK	207	81	173	68	86	34
948	Peach-VY LT	22	7	18	6	9	3
950	Desert Sand-LT	90	34	75	29	38	14
975	Golden Brown-DK	76	29	63	24	32	12
987	Forest Green-DK	347	135	290	113	145	56
988	Forest Green-MD	76	29	63	24	32	12
3011	Khaki Green-DK	3982	1566	3318	1305	1659	653
3012	Khaki Green-MD	556	218	464	182	232	91
3021	Brown Gray-VY DK	378	148	315	123	158	62
3022	Brown Gray-MD	1480	581	1233	485	617	242
3024	Brown Gray-VY LT	972	382	810	318	405	159
3031	Mocha Brown-VY DK	518	203	432	170	216	85
3032	Mocha Brown-MD	1859	731	1550	609	775	305
3041	Antique Violet-MD	22	7	18	6	9	3
3045	Yellow Beige-DK	119	45	99	38	50	19
3046	Yellow Beige-MD	5	2	5	2	2	1
3051	Green Gray-DK	1354	533	1128	444	564	222
3052	Green Gray-MD	1051	412	876	344	438	172
3053	Green Gray	248	97	207	81	104	41
3064	Desert Sand	92	36	77	30	38	15
3072	Beaver Gray-VY LT	695	272	579	227	290	113
3078	Golden Yellow-VY LT	13	4	11	3	5	2
3346	Hunter Green	2675	1053	2229	878	1115	439
3347	Yellow Green-MD	238	92	198	77	99	38
3362	Pine Green-DK	1805	709	1505	591	752	296
3363	Pine Green-MD	2223	875	1853	729	926	365
3371	Black Brown	126	49	105	41	53	20

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3756	Baby Blue-UL VY LT	20	7	17	6	8	3
3768	Gray Green-DK	20	7	17	6	8	3
3772	Desert Sand-VY DK	169	67	141	56	71	28
3774	Desert Sand-VY LT	155	59	129	50	65	25
3776	Mahogany-LT	14	5	12	5	6	2
3778	Terra Cotta-LT	16	5	14	5	7	2
3781	Mocha Brown-DK	2090	823	1742	686	871	343
3782	Mocha Brown-LT	661	259	551	216	275	108
3787	Brown Gray-DK	2223	875	1853	729	926	365
3790	Beige Gray-UL DK	1404	553	1170	461	585	230
3799	Pewter Gray-VY DK	223	86	186	72	93	36
3815	Celadon Green-DK	86	32	72	27	36	14
3820	Straw-DK	4	2	3	2	2	1
3823	Yellow-UL Pale	34	13	29	11	14	5
3826	Golden Brown	7	2	6	2	3	1
3828	Hazelnut Brown	27	9	23	8	11	4
3830	Terra Cotta-MD	49	18	41	15	20	8
3834	Grape-DK	4	2	3	2	2	1
3856	Mahogany-UL VY LT	59	22	50	18	25	9
3857	Rosewood-DK	32	13	27	11	14	5
3859	Rosewood-LT	49	18	41	15	20	8
3860	Cocoa	16	5	14	5	7	2
3862	Mocha Beige-DK	551	216	459	180	230	90
3863	Mocha Beige-MD	81	31	68	26	34	13
3864	Mocha Beige-LT	45	16	38	14	19	7
3865	Winter White	54	20	45	17	23	8
3866	Mocha Brown-UL VY LT	256	99	213	83	107	41

Extended thread usage table.							
DMC	Name	Usage (cm)	Usage (inch)	Usage (cm)	Usage (inch)	Usage (cm)	Usage (inch)
		25		26		27	
223	Shell Pink-LT	18	6	17	6	17	6
300	Mahogany-VY DK	13	5	12	5	12	5
317	Pewter Gray	7	2	7	2	7	2
318	Steel Gray-LT	96	37	92	36	89	35
319	Pistachio Green-VY DK	58	22	56	21	54	21
320	Pistachio Green-MD	34	13	33	12	31	12
353	Peach	3	1	3	1	3	1
356	Terra Cotta-MD	11	4	10	3	10	3
367	Pistachio Green-DK	132	52	127	50	123	48
370	Mustard-MD	140	55	135	53	130	51
371	Mustard	166	65	160	62	154	60
372	Mustard-LT	171	67	164	64	158	62
407	Desert Sand-DK	54	21	52	20	50	19
413	Pewter Gray-DK	55	22	53	21	51	20
414	Steel Gray-DK	99	38	95	37	91	35
415	Pearl Gray	150	58	144	56	139	54
420	Hazelnut Brown-DK	129	50	124	48	119	47
422	Hazelnut Brown-LT	71	27	69	26	66	25
437	Tan-LT	4	1	4	1	4	1
452	Shell Gray-MD	216	85	208	82	200	79
502	Blue Green	204	80	197	77	189	74
503	Blue Green-MD	179	70	172	67	165	65
520	Fern Green-DK	677	266	651	256	627	247
522	Fern Green	392	154	377	148	363	143
523	Fern Green-LT	69	27	66	26	64	25

524	Fern Green-VY LT	457	180	440	173	423	167
535	Ash Gray-VY LT	138	54	133	52	128	50
543	Beige Brown-UL VY LT	3	1	3	1	3	1
563	Jade-LT	4	1	4	1	4	1
564	Jade-VY LT	35	14	34	13	33	13
610	Drab Brown-DK	552	217	530	208	511	201
611	Drab Brown	1609	633	1547	609	1490	586
612	Drab Brown-LT	509	200	489	192	471	185
613	Drab Brown-VY LT	140	55	134	53	129	51
632	Desert Sand-UL VY DK	29	11	28	10	27	10
640	Beige Gray-VY DK	863	339	829	326	799	314
642	Beige Gray-DK	788	310	758	298	730	287
645	Beaver Gray-VY DK	442	174	425	167	409	161
646	Beaver Gray-DK	170	66	163	64	157	61
647	Beaver Gray-MD	589	232	566	223	545	215
648	Beaver Gray-LT	441	174	424	167	409	161
677	Old Gold-VY LT	9	3	8	3	8	3
680	Old Gold-DK	13	5	12	5	12	5
712	Cream	98	38	94	37	91	35
729	Old Gold-MD	1	1	1	1	1	1
730	Olive Green-VY DK	73	29	71	28	68	27
732	Olive Green	62	24	60	23	57	22
738	Tan-VY LT	102	40	98	38	95	37
739	Tan-UL VY LT	72	28	69	27	67	26
745	Yellow-LT Pale	2	1	2	1	2	1
746	Off White	6	2	6	2	5	2
758	Terra Cotta-VY LT	1	1	1	1	1	1
762	Pearl Gray-VY LT	41	16	39	15	38	15
829	Golden Olive-VY DK	86	34	83	33	80	31
830	Golden Olive-DK	285	112	274	107	264	103
831	Golden Olive-MD	16	6	15	6	15	5
832	Golden Olive	16	6	15	6	15	5
833	Golden Olive-LT	37	14	35	14	34	13
834	Golden Olive-VY LT	4	1	4	1	4	1
838	Beige Brown-VY DK	4	1	4	1	4	1
839	Beige Brown-DK	136	53	131	51	126	49
842	Beige Brown-VY LT	18	6	17	6	17	6
898	Coffee Brown-VY DK	248	97	238	93	229	90
920	Copper-MD	11	4	10	3	10	3
926	Gray Green-MD	90	35	87	34	83	33
927	Gray Green-LT	271	107	261	102	251	99
928	Gray Green-VY LT	260	102	250	98	241	95
934	Black Avocado Green	203	80	195	77	188	74
935	Avocado Green-DK	687	270	660	260	636	250
936	Avocado Green-VY DK	558	220	537	211	517	203
937	Avocado Green-MD	184	72	177	69	170	67
938	Coffee Brown-UL DK	83	32	80	31	77	30
948	Peach-VY LT	9	3	8	3	8	3
950	Desert Sand-LT	36	14	35	13	33	13
975	Golden Brown-DK	30	12	29	11	28	11
987	Forest Green-DK	139	54	134	52	129	50
988	Forest Green-MD	30	12	29	11	28	11
3011	Khaki Green-DK	1593	626	1531	602	1475	580
3012	Khaki Green-MD	222	87	214	84	206	81
3021	Brown Gray-VY DK	151	59	145	57	140	55
3022	Brown Gray-MD	592	233	569	224	548	215
3024	Brown Gray-VY LT	389	153	374	147	360	141
3031	Mocha Brown-VY DK	207	81	199	78	192	75
3032	Mocha Brown-MD	744	292	715	281	689	271

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3041	Antique Violet-MD	9	3	8	3	8	3
3045	Yellow Beige-DK	48	18	46	17	44	17
3046	Yellow Beige-MD	2	1	2	1	2	1
3051	Green Gray-DK	541	213	521	205	501	197
3052	Green Gray-MD	420	165	404	159	389	153
3053	Green Gray	99	39	96	37	92	36
3064	Desert Sand	37	14	35	14	34	13
3072	Beaver Gray-VY LT	278	109	267	105	257	101
3078	Golden Yellow-VY LT	5	1	5	1	5	1
3346	Hunter Green	1070	421	1029	405	991	390
3347	Yellow Green-MD	95	37	91	35	88	34
3362	Pine Green-DK	722	284	694	273	669	263
3363	Pine Green-MD	889	350	855	336	823	324
3371	Black Brown	50	19	48	19	47	18
3756	Baby Blue-UL VY LT	8	3	8	3	7	3
3768	Gray Green-DK	8	3	8	3	7	3
3772	Desert Sand-VY DK	68	27	65	26	63	25
3774	Desert Sand-VY LT	62	24	60	23	57	22
3776	Mahogany-LT	6	2	6	2	5	2
3778	Terra Cotta-LT	6	2	6	2	6	2
3781	Mocha Brown-DK	836	329	804	316	774	305
3782	Mocha Brown-LT	264	104	254	100	245	96
3787	Brown Gray-DK	889	350	855	336	823	324
3790	Beige Gray-UL DK	562	221	540	213	520	205
3799	Pewter Gray-VY DK	89	35	86	33	83	32
3815	Celadon Green-DK	35	13	33	12	32	12
3820	Straw-DK	1	1	1	1	1	1
3823	Yellow-UL Pale	14	5	13	5	13	5
3826	Golden Brown	3	1	3	1	3	1
3828	Hazelnut Brown	11	4	10	3	10	3
3830	Terra Cotta-MD	19	7	19	7	18	7
3834	Grape-DK	1	1	1	1	1	1
3856	Mahogany-UL VY LT	24	9	23	8	22	8
3857	Rosewood-DK	13	5	12	5	12	5
3859	Rosewood-LT	19	7	19	7	18	7
3860	Cocoa	6	2	6	2	6	2
3862	Mocha Beige-DK	220	86	212	83	204	80
3863	Mocha Beige-MD	32	12	31	12	30	11
3864	Mocha Beige-LT	18	6	17	6	17	6
3865	Winter White	22	8	21	8	20	7
3866	Mocha Brown-UL VY LT	102	40	98	38	95	37

Extended thread usage table.							
DMC	Name	Usage (cm)	Usage (inch)	Usage (cm)	Usage (inch)	Usage (cm)	Usage (inch)
		28		30		32	
223	Shell Pink-LT	16	6	15	5	14	5
300	Mahogany-VY DK	12	5	11	4	10	4
317	Pewter Gray	6	2	6	2	6	2
318	Steel Gray-LT	86	33	80	31	75	29
319	Pistachio Green-VY DK	52	20	49	19	46	17
320	Pistachio Green-MD	30	12	28	11	26	10
353	Peach	3	1	2	1	2	1
356	Terra Cotta-MD	10	3	9	3	8	3
367	Pistachio Green-DK	118	46	110	43	104	41
370	Mustard-MD	125	49	117	46	110	43
371	Mustard	149	58	139	54	130	51

372	Mustard-LT	152	60	142	56	133	52
407	Desert Sand-DK	48	19	45	17	42	16
413	Pewter Gray-DK	50	19	46	18	43	17
414	Steel Gray-DK	88	34	82	32	77	30
415	Pearl Gray	134	52	125	49	117	46
420	Hazelnut Brown-DK	115	45	107	42	101	39
422	Hazelnut Brown-LT	64	24	59	23	56	21
437	Tan-LT	4	1	4	1	3	1
452	Shell Gray-MD	193	76	180	71	169	66
502	Blue Green	183	71	170	67	160	62
503	Blue Green-MD	159	62	149	58	140	55
520	Fern Green-DK	604	238	564	222	529	208
522	Fern Green	350	138	327	128	307	120
523	Fern Green-LT	62	24	58	22	54	21
524	Fern Green-VY LT	408	161	381	150	357	141
535	Ash Gray-VY LT	123	48	115	45	108	42
543	Beige Brown-UL VY LT	3	1	2	1	2	1
563	Jade-LT	4	1	4	1	3	1
564	Jade-VY LT	32	12	29	11	28	11
610	Drab Brown-DK	492	194	460	181	431	169
611	Drab Brown	1437	565	1341	527	1257	494
612	Drab Brown-LT	455	179	424	167	398	156
613	Drab Brown-VY LT	125	49	116	46	109	43
632	Desert Sand-UL VY DK	26	10	24	9	23	8
640	Beige Gray-VY DK	770	303	719	283	674	265
642	Beige Gray-DK	704	277	657	259	616	242
645	Beaver Gray-VY DK	395	155	368	145	345	136
646	Beaver Gray-DK	152	59	142	55	133	52
647	Beaver Gray-MD	526	207	491	193	460	181
648	Beaver Gray-LT	394	155	368	145	345	136
677	Old Gold-VY LT	8	3	7	2	7	2
680	Old Gold-DK	12	5	11	4	10	4
712	Cream	87	34	82	32	77	30
729	Old Gold-MD	1	1	1	1	1	1
730	Olive Green-VY DK	66	26	61	24	57	23
732	Olive Green	55	21	52	20	48	19
738	Tan-VY LT	91	35	85	33	80	31
739	Tan-UL VY LT	64	25	60	23	56	22
745	Yellow-LT Pale	2	1	2	1	2	1
746	Off White	5	2	5	2	5	2
758	Terra Cotta-VY LT	1	1	1	1	1	1
762	Pearl Gray-VY LT	37	14	34	13	32	12
829	Golden Olive-VY DK	77	30	72	28	68	26
830	Golden Olive-DK	255	100	238	93	223	87
831	Golden Olive-MD	14	5	13	5	12	5
832	Golden Olive	14	5	13	5	12	5
833	Golden Olive-LT	33	13	31	12	29	11
834	Golden Olive-VY LT	4	1	4	1	3	1
838	Beige Brown-VY DK	4	1	4	1	3	1
839	Beige Brown-DK	122	48	113	44	106	42
842	Beige Brown-VY LT	16	6	15	5	14	5
898	Coffee Brown-VY DK	221	87	206	81	194	76
920	Copper-MD	10	3	9	3	8	3
926	Gray Green-MD	80	32	75	29	70	28
927	Gray Green-LT	242	95	226	89	212	83
928	Gray Green-VY LT	232	91	217	85	203	80
934	Black Avocado Green	181	71	169	67	159	62
935	Avocado Green-DK	613	241	572	225	537	211
936	Avocado Green-VY DK	498	196	465	183	436	172

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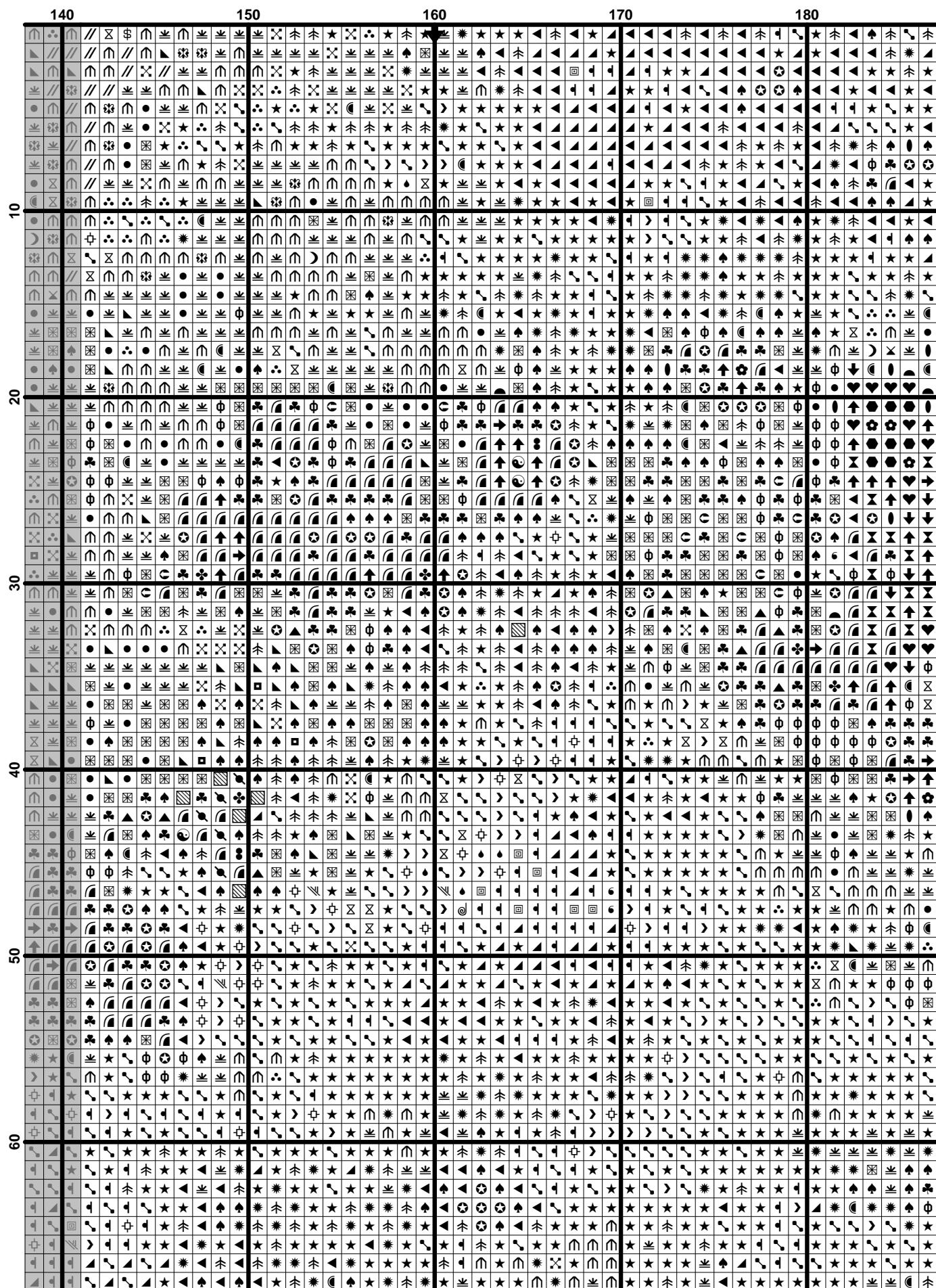
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937	Avocado Green-MD	164	64	153	60	143	56
938	Coffee Brown-UL DK	74	29	69	27	65	25
948	Peach-VY LT	8	3	7	2	7	2
950	Desert Sand-LT	32	12	30	11	28	11
975	Golden Brown-DK	27	10	25	10	24	9
987	Forest Green-DK	124	48	116	45	109	42
988	Forest Green-MD	27	10	25	10	24	9
3011	Khaki Green-DK	1422	559	1327	522	1244	489
3012	Khaki Green-MD	199	78	185	73	174	68
3021	Brown Gray-VY DK	135	53	126	49	118	46
3022	Brown Gray-MD	528	208	493	194	462	182
3024	Brown Gray-VY LT	347	136	324	127	304	119
3031	Mocha Brown-VY DK	185	73	173	68	162	64
3032	Mocha Brown-MD	664	261	620	244	581	228
3041	Antique Violet-MD	8	3	7	2	7	2
3045	Yellow Beige-DK	42	16	40	15	37	14
3046	Yellow Beige-MD	2	1	2	1	2	1
3051	Green Gray-DK	483	190	451	178	423	167
3052	Green Gray-MD	375	147	350	137	329	129
3053	Green Gray	89	35	83	32	78	30
3064	Desert Sand	33	13	31	12	29	11
3072	Beaver Gray-VY LT	248	97	232	91	217	85
3078	Golden Yellow-VY LT	5	1	4	1	4	1
3346	Hunter Green	955	376	892	351	836	329
3347	Yellow Green-MD	85	33	79	31	74	29
3362	Pine Green-DK	645	253	602	236	564	222
3363	Pine Green-MD	794	312	741	292	695	273
3371	Black Brown	45	17	42	16	39	15
3756	Baby Blue-UL VY LT	7	3	7	2	6	2
3768	Gray Green-DK	7	3	7	2	6	2
3772	Desert Sand-VY DK	60	24	56	22	53	21
3774	Desert Sand-VY LT	55	21	52	20	48	19
3776	Mahogany-LT	5	2	5	2	5	2
3778	Terra Cotta-LT	6	2	5	2	5	2
3781	Mocha Brown-DK	746	294	697	274	653	257
3782	Mocha Brown-LT	236	93	220	86	206	81
3787	Brown Gray-DK	794	312	741	292	695	273
3790	Beige Gray-UL DK	501	197	468	184	439	173
3799	Pewter Gray-VY DK	80	31	74	29	70	27
3815	Celadon Green-DK	31	12	29	11	27	10
3820	Straw-DK	1	1	1	1	1	1
3823	Yellow-UL Pale	12	5	11	4	11	4
3826	Golden Brown	3	1	2	1	2	1
3828	Hazelnut Brown	10	3	9	3	8	3
3830	Terra Cotta-MD	17	6	16	6	15	6
3834	Grape-DK	1	1	1	1	1	1
3856	Mahogany-UL VY LT	21	8	20	7	19	7
3857	Rosewood-DK	12	5	11	4	10	4
3859	Rosewood-LT	17	6	16	6	15	6
3860	Cocoa	6	2	5	2	5	2
3862	Mocha Beige-DK	197	77	184	72	172	68
3863	Mocha Beige-MD	29	11	27	10	25	10
3864	Mocha Beige-LT	16	6	15	5	14	5
3865	Winter White	19	7	18	7	17	6
3866	Mocha Brown-UL VY LT	91	35	85	33	80	31

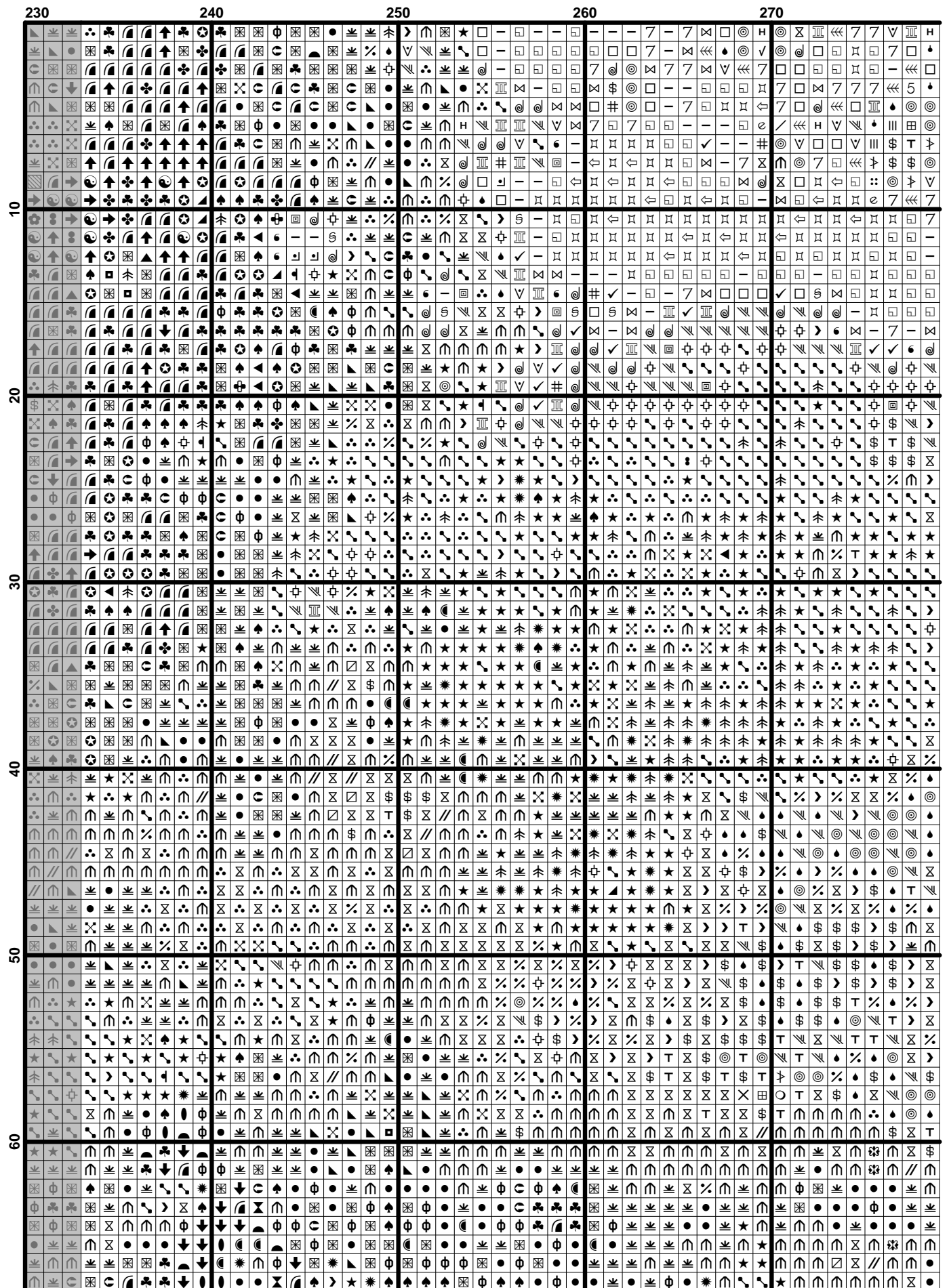
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	50	60	70	80	90
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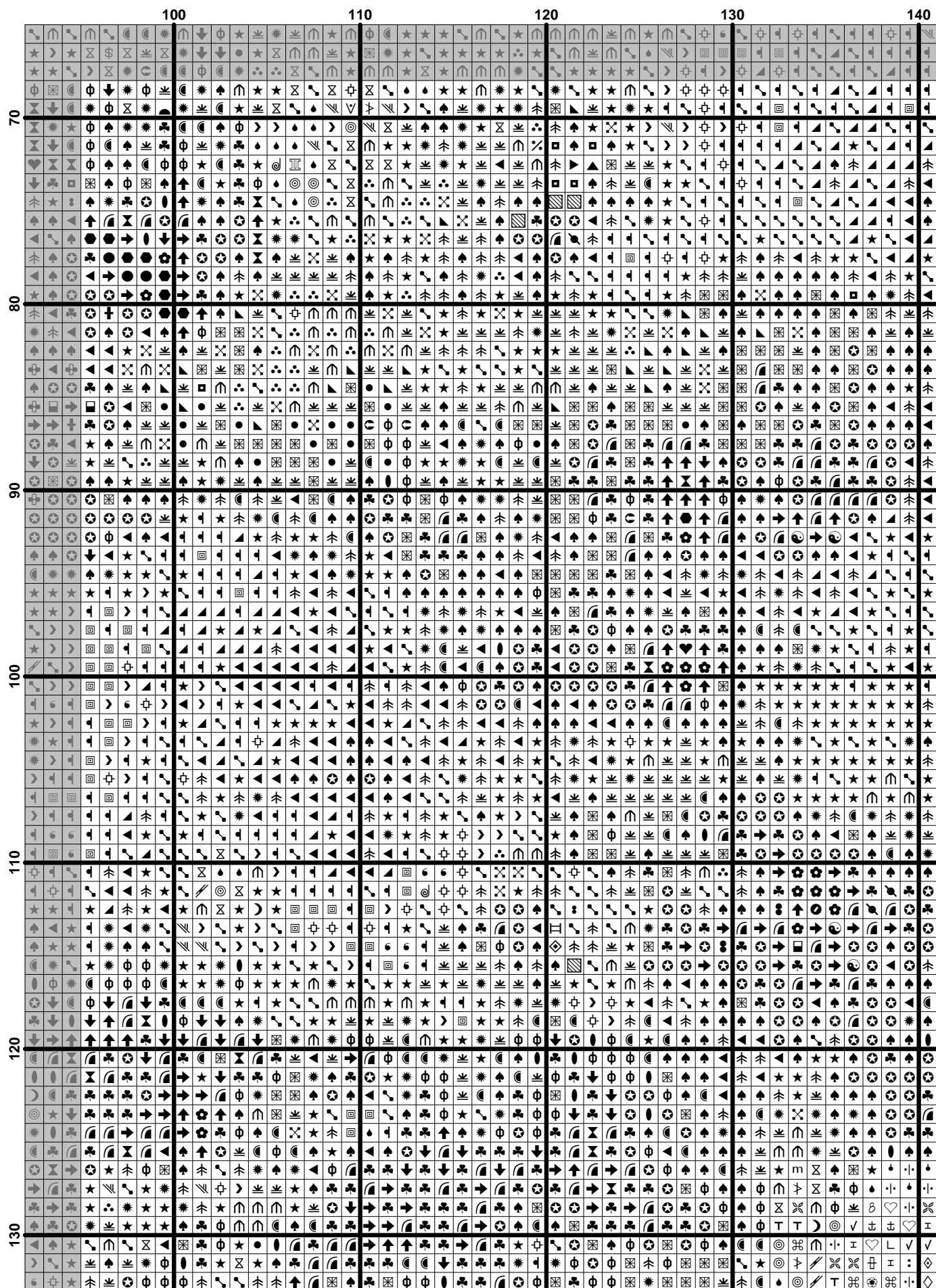
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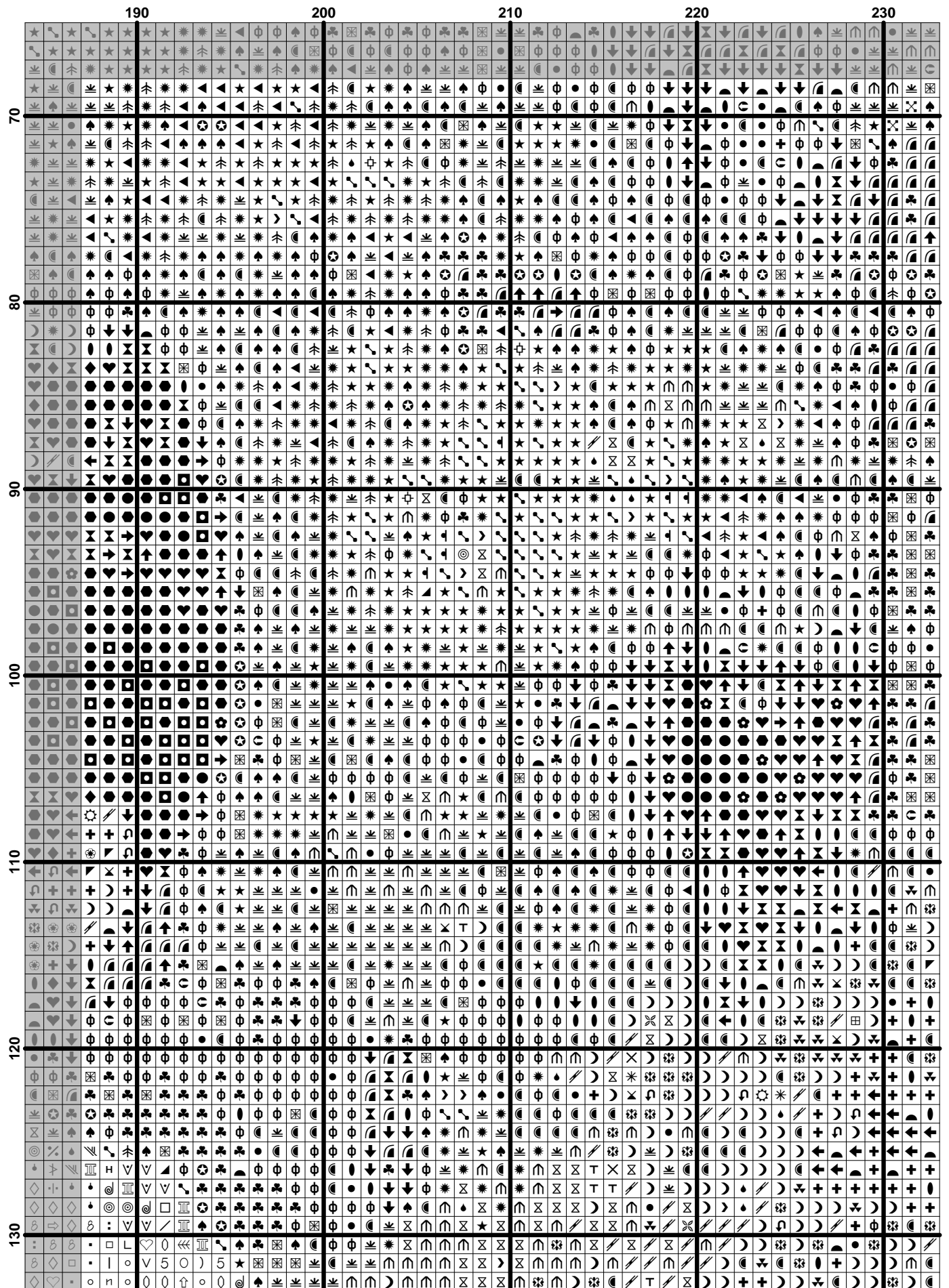
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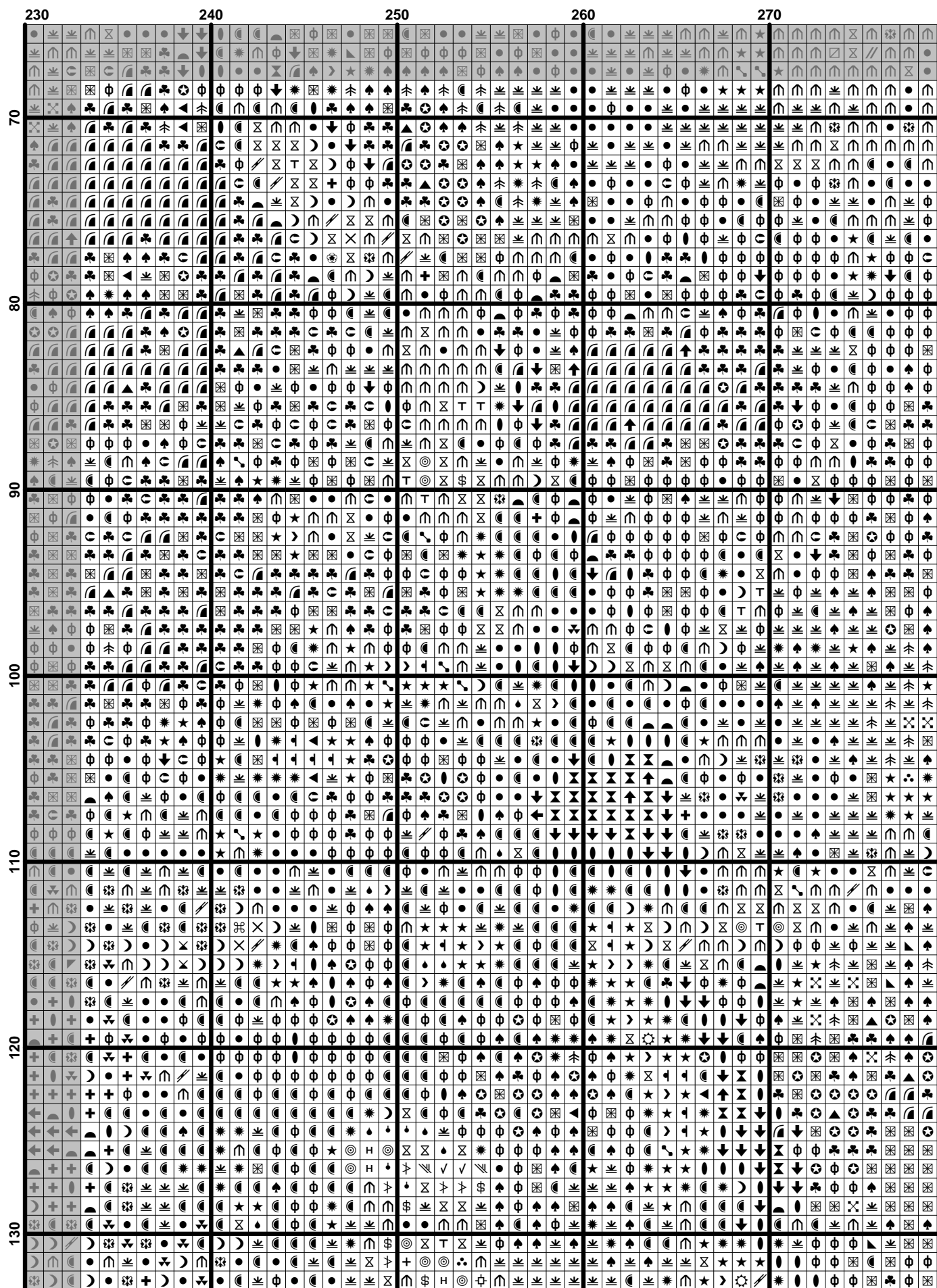
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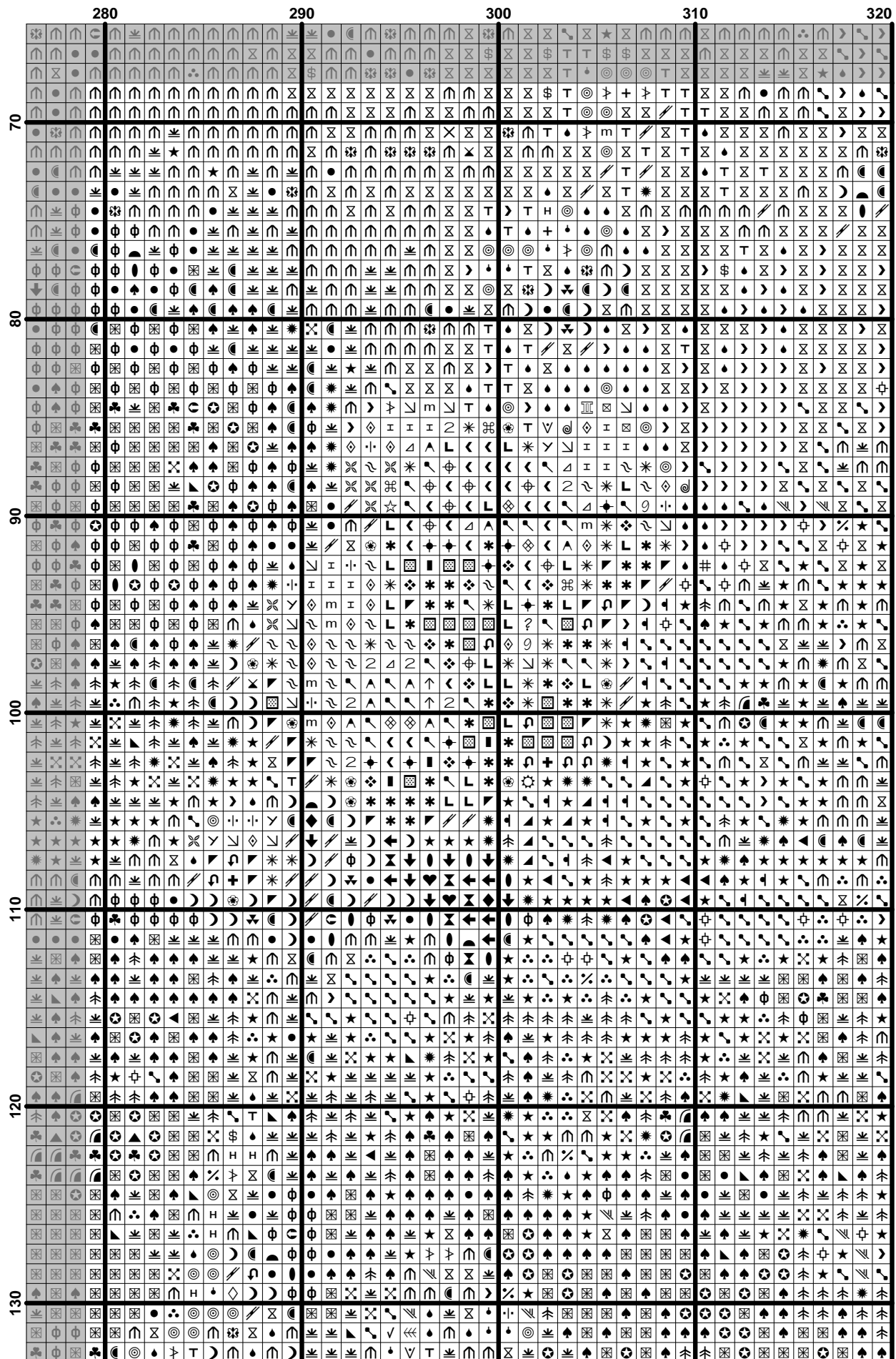
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	140	150	160	170	180
70	☼	☼	☼	☼	☼
80	☼	☼	☼	☼	☼
90	☼	☼	☼	☼	☼
100	☼	☼	☼	☼	☼
110	☼	☼	☼	☼	☼
120	☼	☼	☼	☼	☼
130	☼	☼	☼	☼	☼







	10	20	30	40
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160				
170				
180				
190				

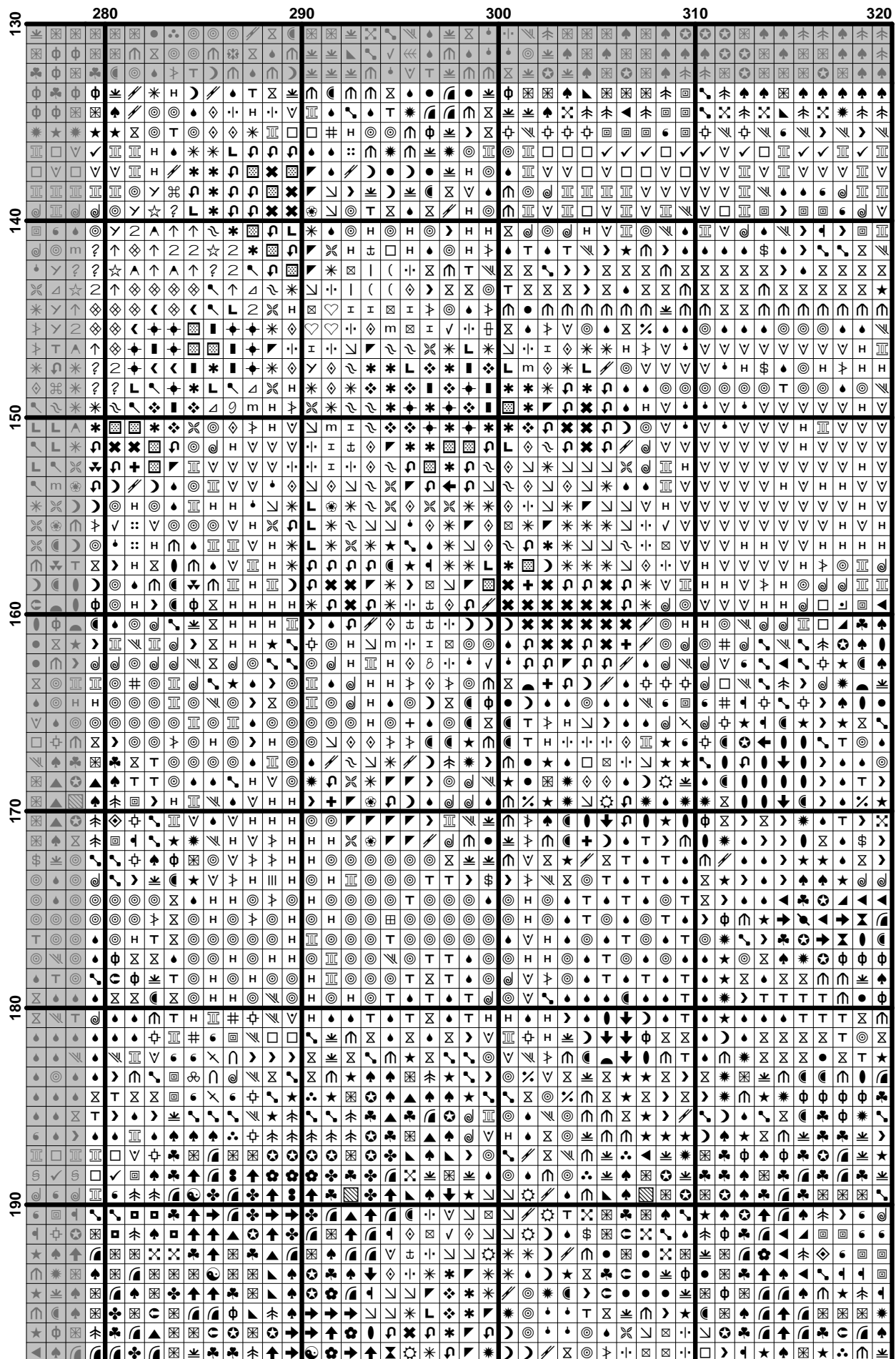
[illegible]

$$(24) \quad \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} f(s) ds = \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} \left(\sum_{k=0}^\infty \frac{(t-s)^k}{k!} f^{(k)}(s) \right) ds$$

$$(25) \quad \mathcal{L}(\mathcal{A}) = \mathcal{L}(\mathcal{B}) \cup \mathcal{L}(\mathcal{C}) \quad (26)$$

$$(26) \quad \mathcal{L}(\mathcal{A}) = \mathcal{L}(\mathcal{B}) \quad (27)$$

130	230	240	250	260	270
140					
150					
160					
170					
180					
190					



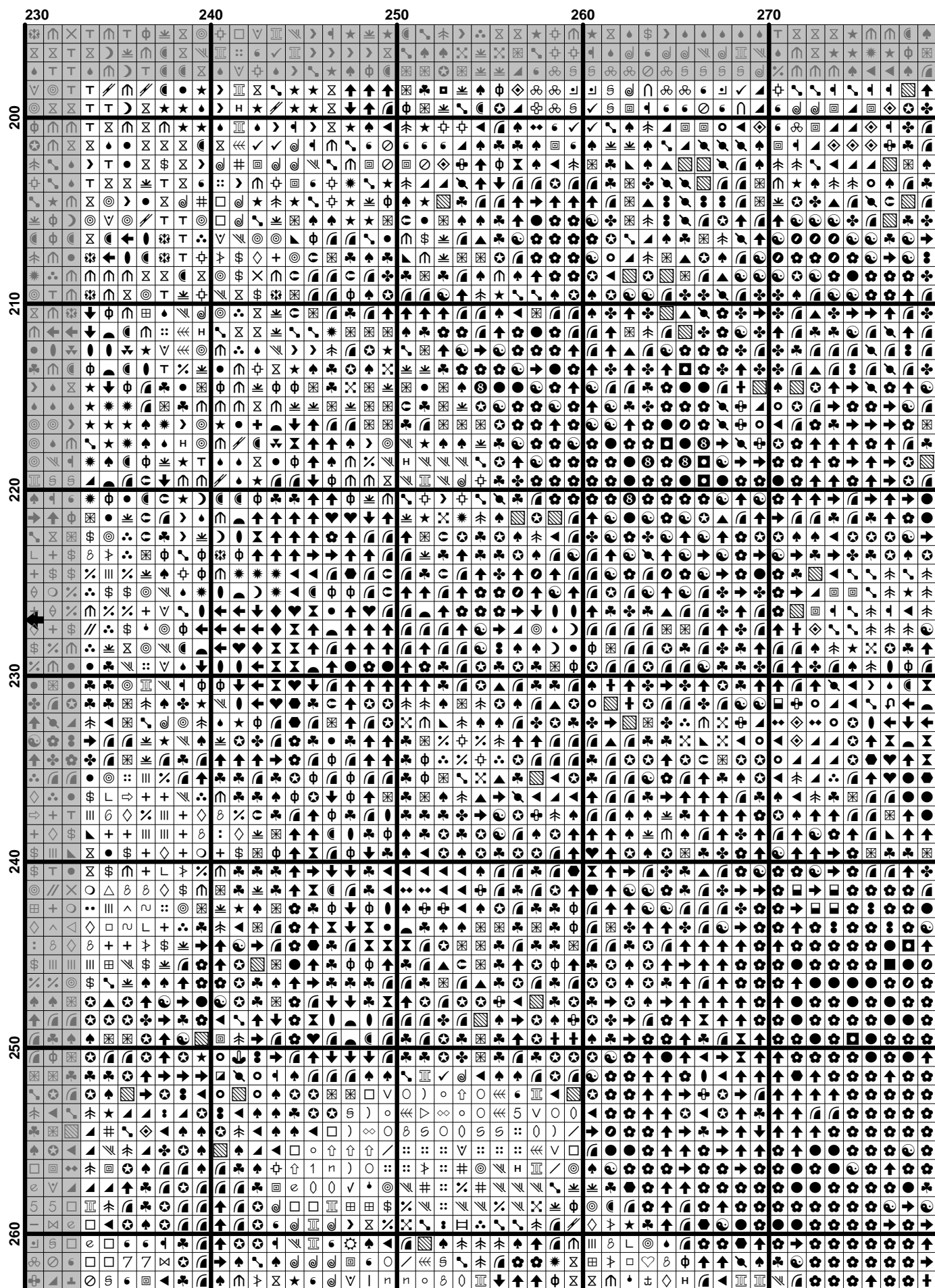
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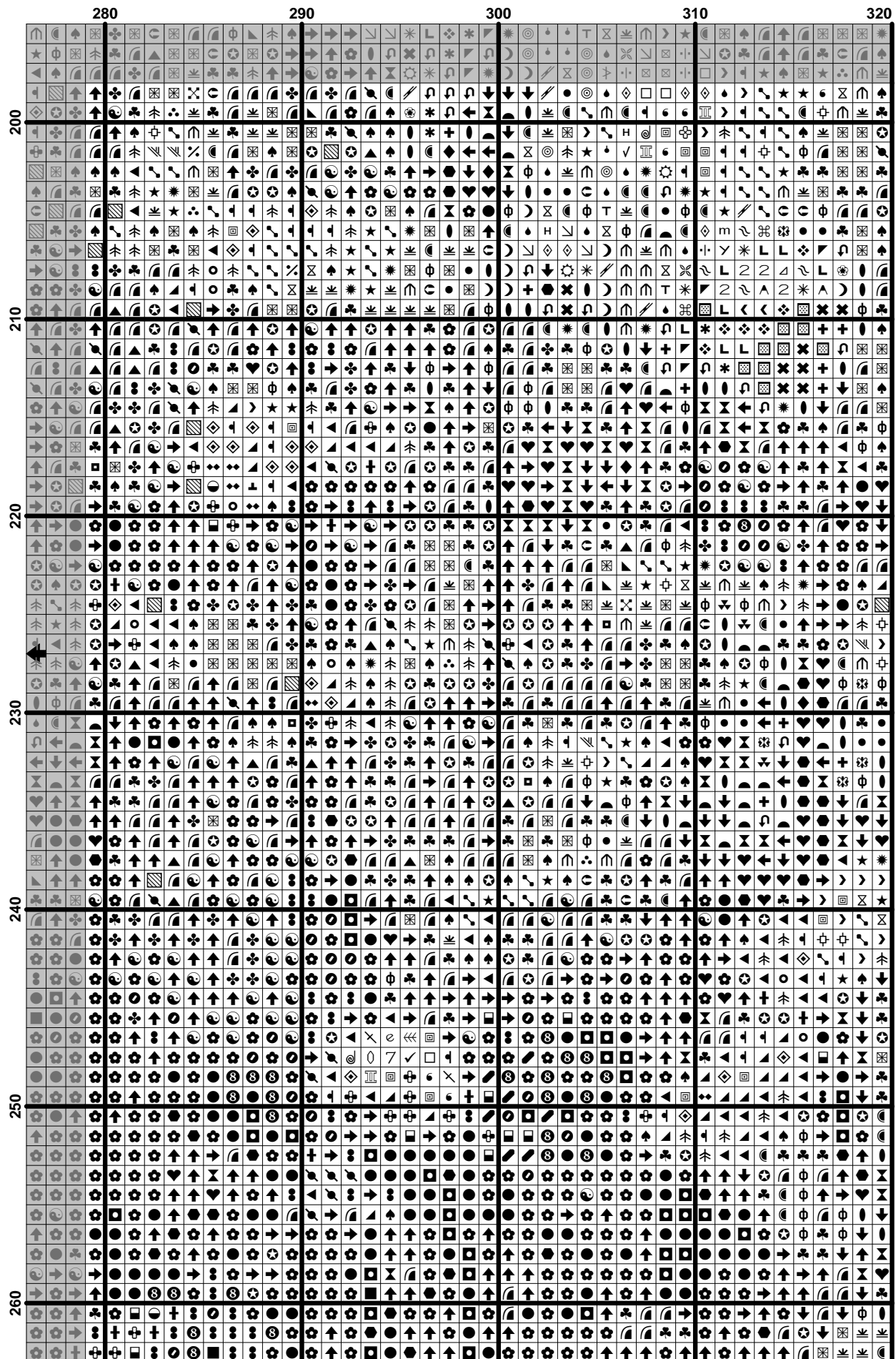
	50	60	70	80	90
200	<div> </div>	<div> </div>	<div> </div>	<div> </div>	<div> </div>
210	<div> </div>	<div> </div>	<div> </div>	<div> </div>	<div> </div>
220	<div> </div>	<div> </div>	<div> </div>	<div> </div>	<div> </div>
230	<div> </div>	<div> </div>	<div> </div>	<div> </div>	<div> </div>
240	<div> </div>	<div> </div>	<div> </div>	<div> </div>	<div> </div>
250	<div> </div>	<div> </div>	<div> </div>	<div> </div>	<div> </div>
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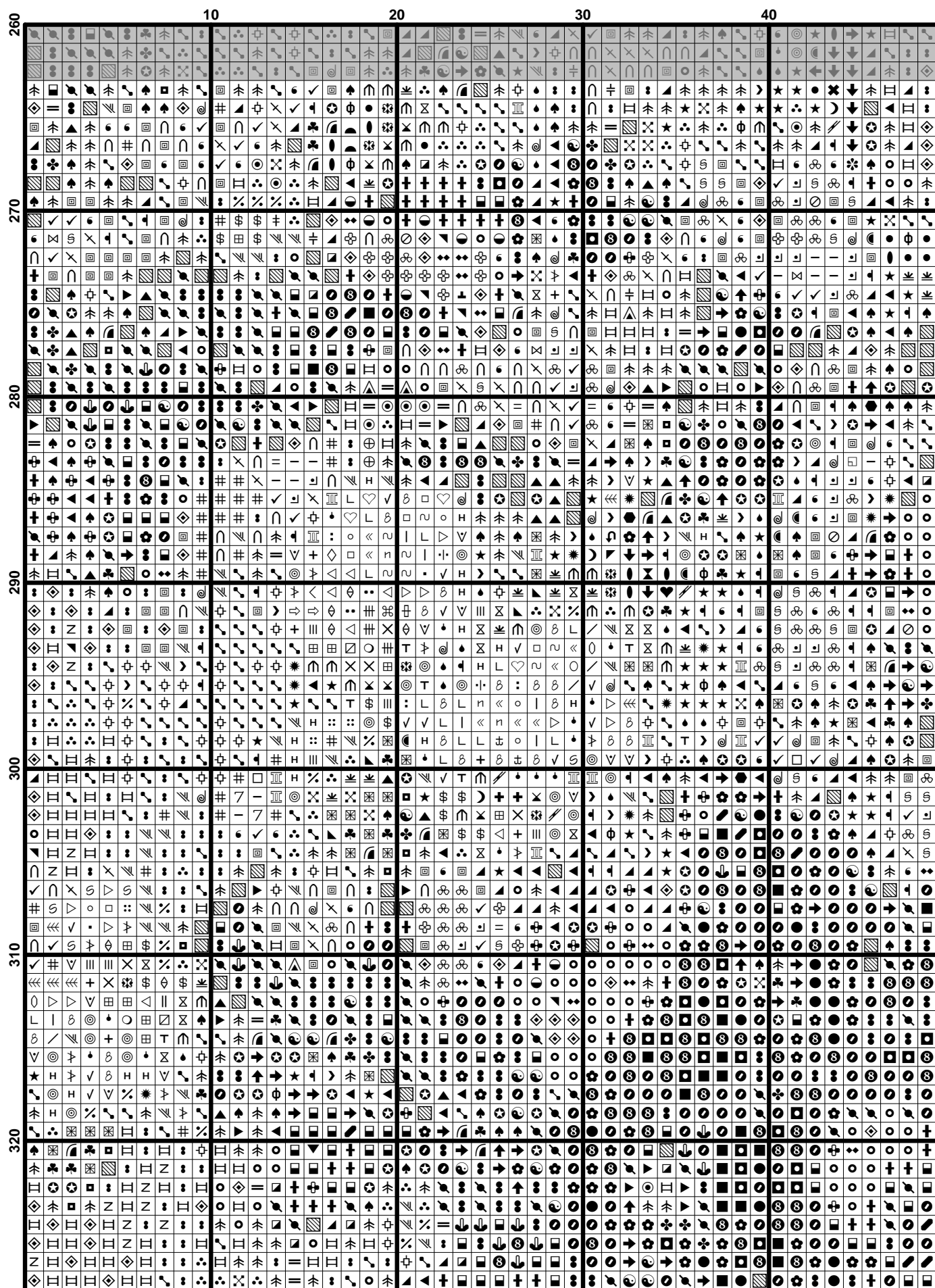
$$(31) \quad \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} f(s) ds = \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} f(s) ds + \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} f(s) ds$$

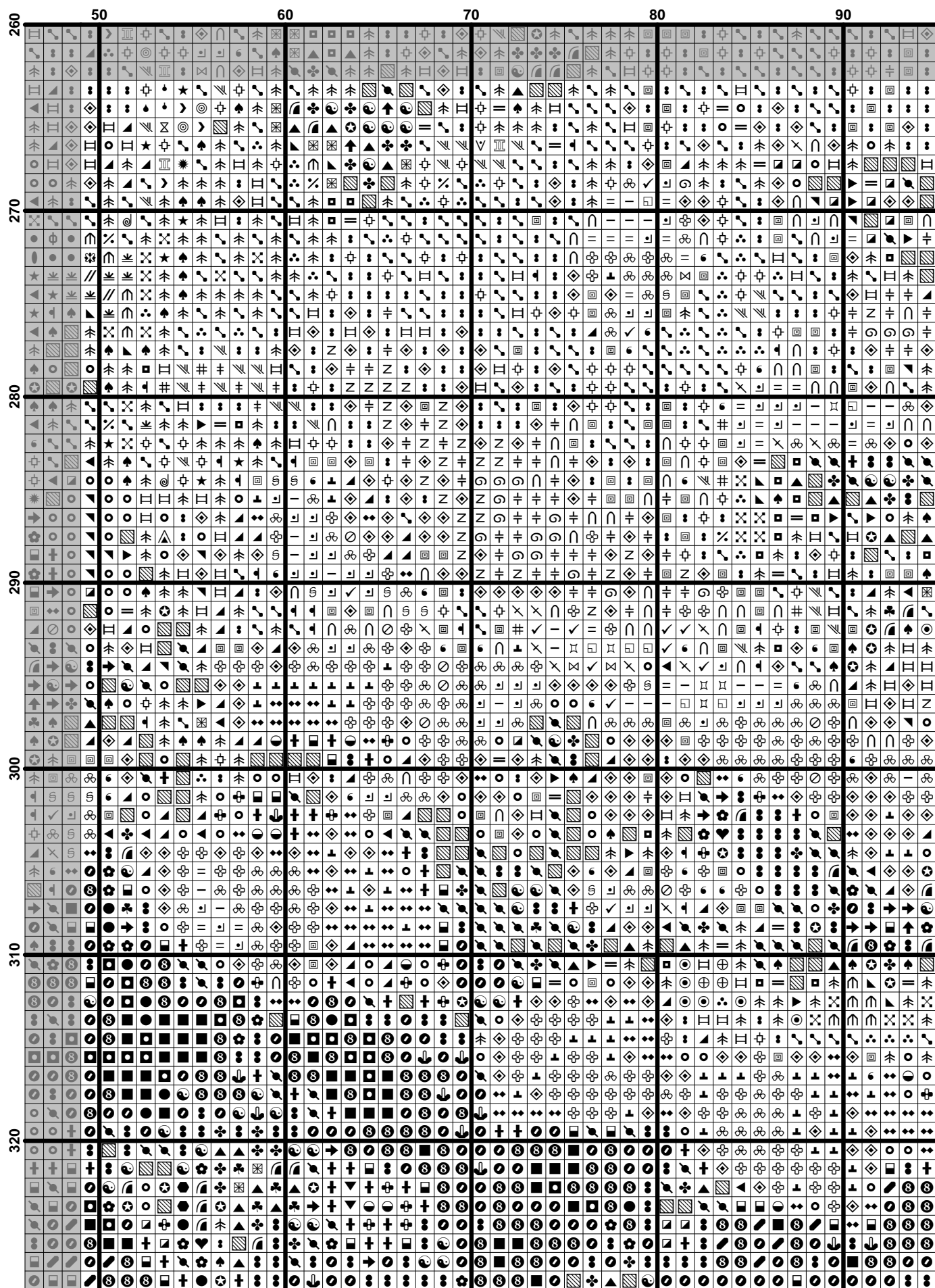
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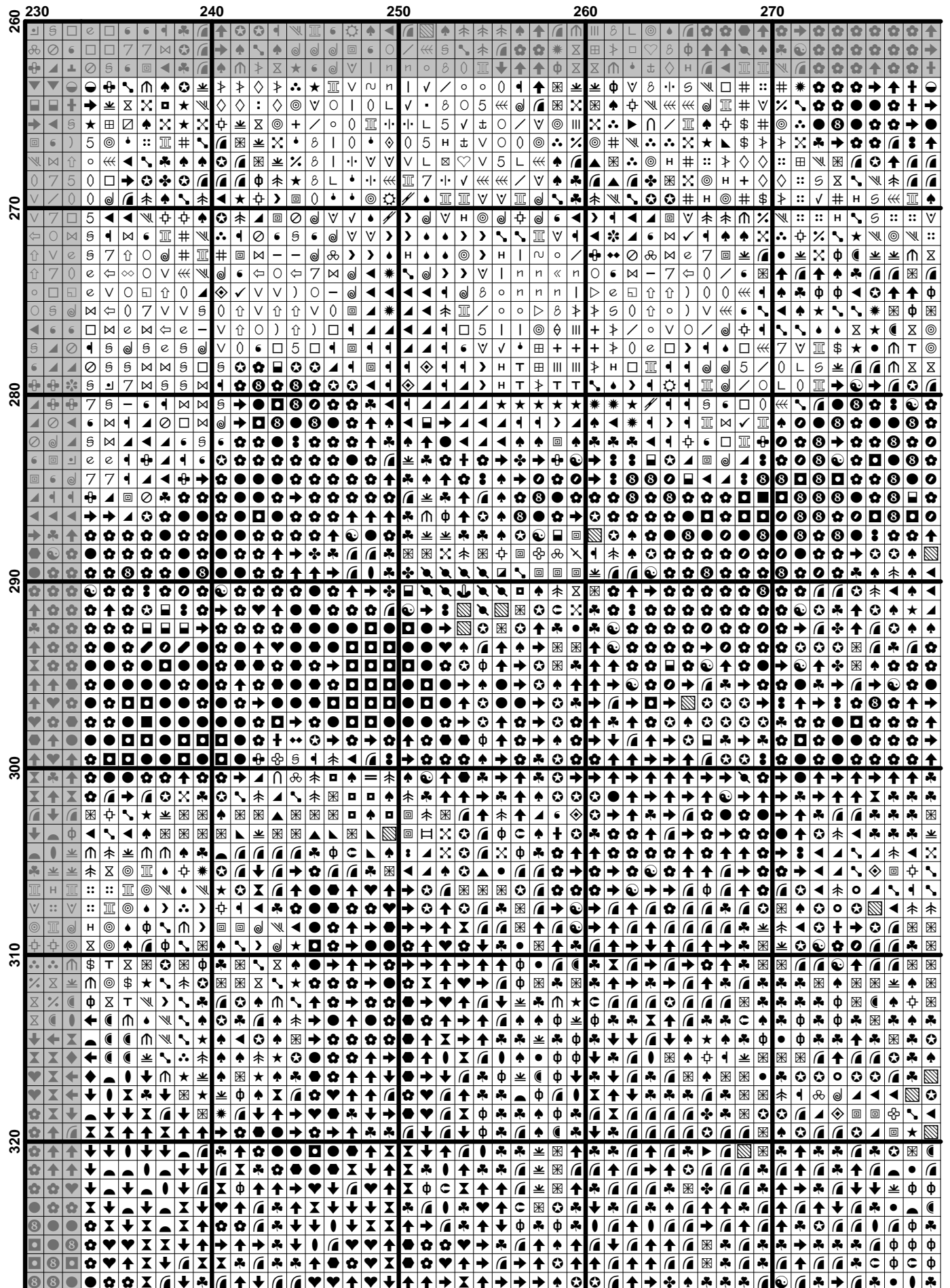


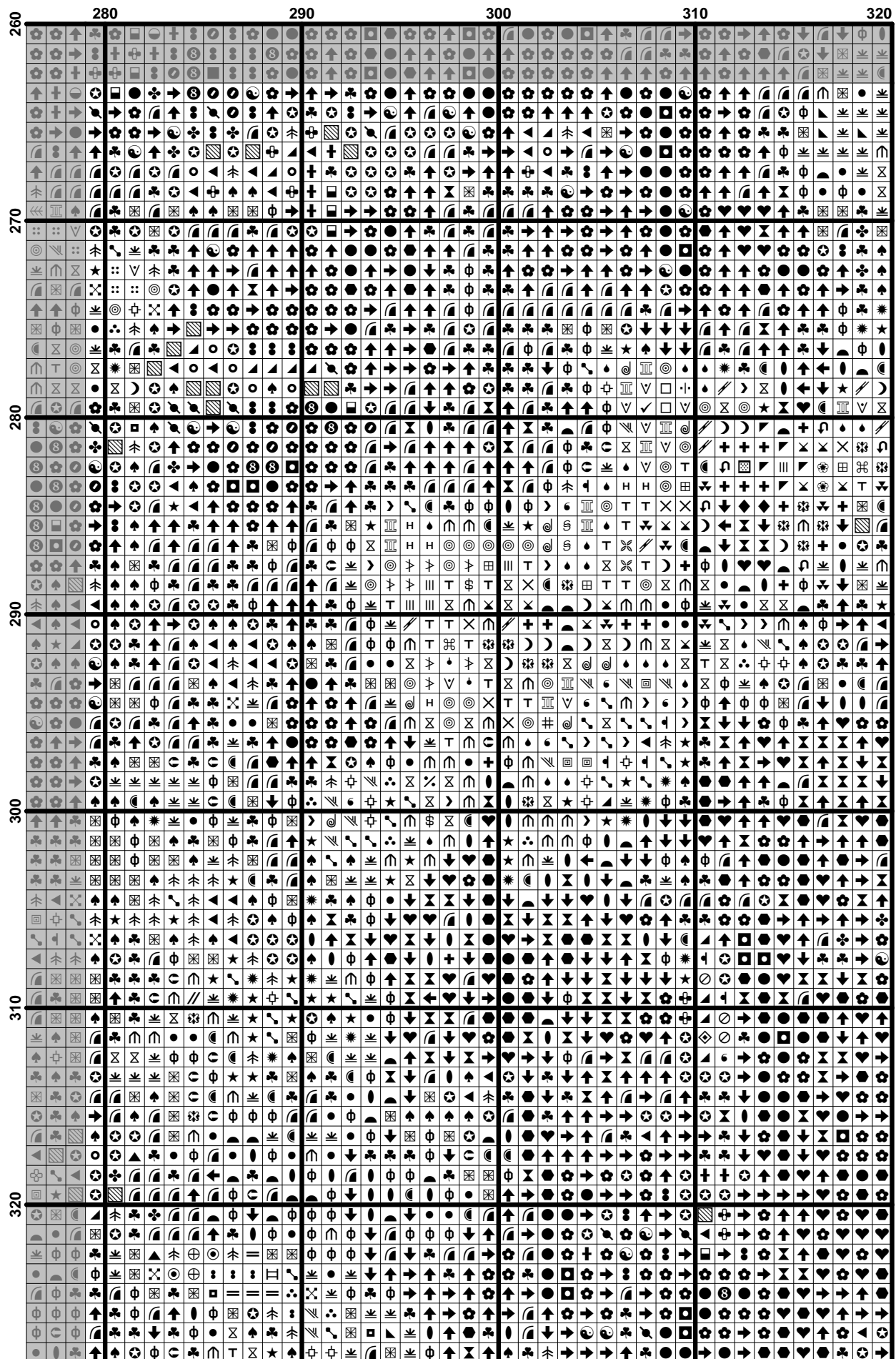


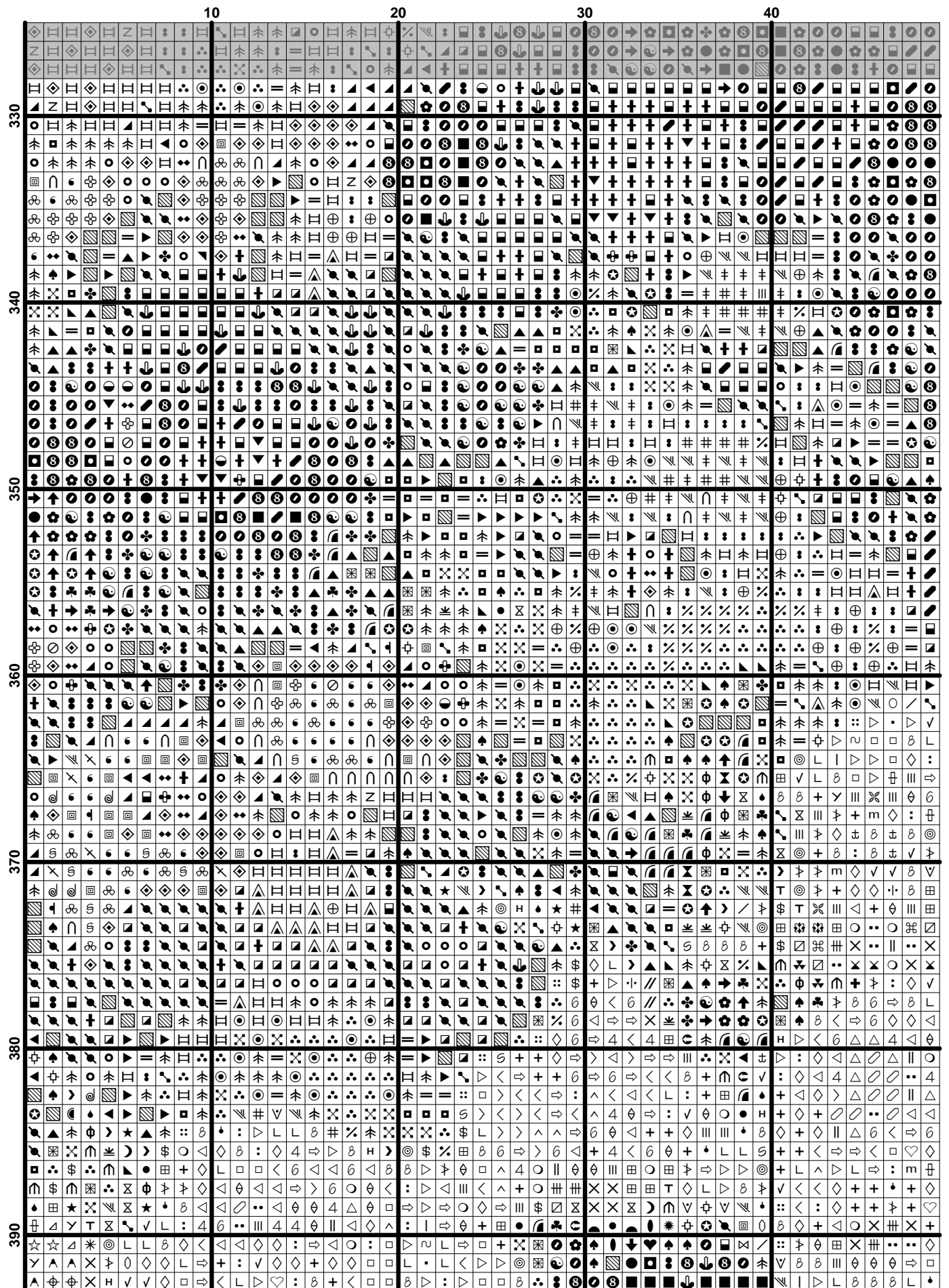
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300					
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320					

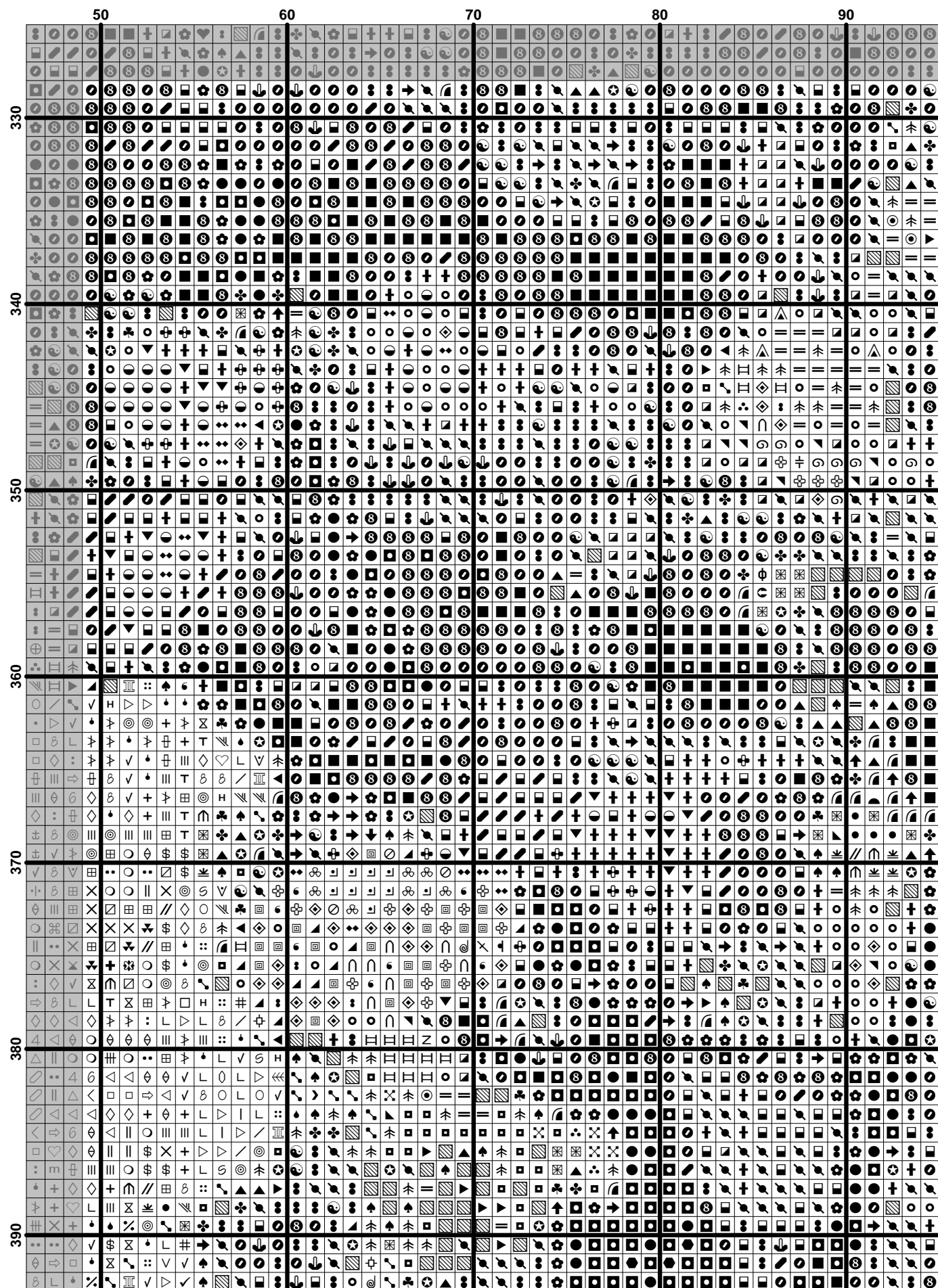
$$(39) \quad \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} f(s) ds = \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} f(s) ds$$

$$(40) \quad \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} f(s) ds = \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} \left(\sum_{k=0}^\infty \frac{(t-s)^k}{k!} f^{(k)}(s) \right) ds$$









	100	110	120	130	140
330
340
350
360
370
380
390

(47)

[illegible]

