

1311 Blue and Yellow Macaw



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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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Blue And Yellow Macaw

Stitch Count	
Horizontal:	300
Vertical:	449

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:	55	21.37	82	31.98	48	18.7	72	27.98	43	16.625	64	24.875
Including Margins:	71	28	98	38	64	25	88	34	59	23	80	31
	10				12				24			
	Width		Height		Width		Height		Width		Height	
	cm	inch	cm	inch	cm	inch	cm	inch	cm	inch	cm	inch
Pattern:	77	29.91	114	44.77	64	24.93	95	37.31	32	12.46	47	18.65
Including Margins:	93	36	130	51	80	31	111	44	48	19	63	25
	25				26				27			
	Width		Height		Width		Height		Width		Height	
	cm	inch	cm	inch	cm	inch	cm	inch	cm	inch	cm	inch
Pattern:	30	11.96	45	17.9	29	11.5	44	17.22	28	11.08	42	16.58
Including Margins:	46	18	61	24	45	18	60	24	44	18	58	23
	28				30				32			
	Width		Height		Width		Height		Width		Height	
	cm	inch	cm	inch	cm	inch	cm	inch	cm	inch	cm	inch
Pattern:	27	10.68	41	15.99	25	9.97	38	14.92	24	9.34	35	13.99
Including Margins:	43	17	57	22	41	16	54	21	40	16	51	20

Solid Color Stitches. Use two strands of the specified color for these stitches.		
Symbol	DMC	Name
	224	Shell Pink-VY LT
	301	Mahogany-MD
	310	Black
	311	Navy Blue-MD
	312	Baby Blue-VY DK
	317	Pewter Gray
	318	Steel Gray-LT
	336	Navy Blue
	370	Mustard-MD
	407	Desert Sand-DK
	414	Steel Gray-DK
	415	Pearl Gray
	420	Hazelnut Brown-DK
	434	Brown-LT
	435	Brown-VY LT
	445	Lemon-LT
	452	Shell Gray-MD
	471	Avocado Green-VY LT
	501	Blue Green-DK
	502	Blue Green
	517	Wedgewood-DK
	522	Fern Green
	524	Fern Green-VY LT
	535	Ash Gray-VY LT
	611	Drab Brown
	612	Drab Brown-LT
	632	Desert Sand-UL VY DK
	644	Beige Gray-MD
	645	Beaver Gray-VY DK
	646	Beaver Gray-DK
	647	Beaver Gray-MD
	676	Old Gold-LT
	677	Old Gold-VY LT
	726	Topaz-LT
	729	Old Gold-MD
	738	Tan-VY LT
	739	Tan-UL VY LT
	741	Tangerine-MD
	742	Tangerine-LT
	743	Yellow-MD
	783	Topaz-MD
	793	Cornflower Blue-MD
	797	Royal Blue
	798	Delft Blue-DK
	823	Navy Blue-DK
	824	Blue-VY DK
	825	Blue-DK
	826	Blue-MD
	830	Golden Olive-DK
	834	Golden Olive-VY LT

	838	Beige Brown-VY DK
	844	Beaver Brown-UL DK
	924	Gray Green--VY DK
	926	Gray Green-MD
	927	Gray Green-LT
	928	Gray Green-VY LT
	930	Antique Blue-DK
	948	Peach-VY LT
	950	Desert Sand-LT
	973	Canary-BRT
	975	Golden Brown-DK
	976	Golden Brown-MD
	977	Golden Brown-LT
	995	Electric Blue-DK
	996	Electric Blue-MD
	3021	Brown Gray-VY DK
	3024	Brown Gray-VY LT
	3031	Mocha Brown-VY DK
	3032	Mocha Brown-MD
	3041	Antique Violet-MD
	3045	Yellow Beige-DK
	3072	Beaver Gray-VY LT
	3346	Hunter Green
	3347	Yellow Green-MD
	3747	Blue Violet-VY LT
	3753	Antique Blue-UL VY LT
	3756	Baby Blue-UL VY LT
	3768	Gray Green-DK
	3770	Tawny-VY LT
	3774	Desert Sand-VY LT
	3781	Mocha Brown-DK
	3787	Brown Gray-DK
	3807	Cornflower Blue
	3815	Celadon Green-DK
	3820	Straw-DK
	3822	Straw-LT
	3826	Golden Brown
	3827	Golden Brown-Pale
	3829	Old Gold-VY DK
	3843	Electric Blue
	3848	Teal Green-MD
	3852	Straw-VY DK
	3853	Autumn Gold-DK
	3855	Autumn Gold-LT
	3860	Cocoa
	3861	Cocoa-LT
	3862	Mocha Beige-DK
	3863	Mocha Beige-MD
	3864	Mocha Beige-LT
	3865	Winter White
	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
⌘	420	Hazelnut Brown-DK	975	Golden Brown-DK
⌘	301	Mahogany-MD	976	Golden Brown-MD
➔	838	Beige Brown-VY DK	975	Golden Brown-DK
::	742	Tangerine-LT	3852	Straw-VY DK
m	741	Tangerine-MD	742	Tangerine-LT
+	726	Topaz-LT	742	Tangerine-LT
н	407	Desert Sand-DK	738	Tan-VY LT
⬆	645	Beaver Gray-VY DK	646	Beaver Gray-DK
«	3865	Winter White	3866	Mocha Brown-UL VY LT
б	742	Tangerine-LT	973	Canary-BRT
⊗	3860	Cocoa	3863	Mocha Beige-MD
▲	646	Beaver Gray-DK	3860	Cocoa
..	3820	Straw-DK	3853	Autumn Gold-DK
✕	301	Mahogany-MD	435	Brown-VY LT
›	3032	Mocha Brown-MD	3863	Mocha Beige-MD
⊕	3827	Golden Brown-Pale	3855	Autumn Gold-LT
↑	336	Navy Blue	930	Antique Blue-DK
×	318	Steel Gray-LT	414	Steel Gray-DK
⋮	721	Orange Spice-MD	976	Golden Brown-MD
1	3865	Winter White	3756	Baby Blue-UL VY LT
⊕	996	Electric Blue-MD	3747	Blue Violet-VY LT
⌘	996	Electric Blue-MD	798	Delft Blue-DK
⊗	996	Electric Blue-MD	3807	Cornflower Blue
⬆	797	Royal Blue	798	Delft Blue-DK
⬆	996	Electric Blue-MD	793	Cornflower Blue-MD
⊕	3843	Electric Blue	798	Delft Blue-DK
☯	312	Baby Blue-VY DK	336	Navy Blue
●	823	Navy Blue-DK	3799	Pewter Gray-VY DK
▣	797	Royal Blue	3843	Electric Blue
▶	3848	Teal Green-MD	825	Blue-DK
☯	312	Baby Blue-VY DK	825	Blue-DK
⊗	823	Navy Blue-DK	924	Gray Green--VY DK
⊗	336	Navy Blue	924	Gray Green--VY DK
▣	797	Royal Blue	824	Blue-VY DK
⊕	793	Cornflower Blue-MD	415	Pearl Gray
♠	3848	Teal Green-MD	3768	Gray Green-DK
▣	501	Blue Green-DK	3815	Celadon Green-DK
⋮	501	Blue Green-DK	924	Gray Green--VY DK
⊗	471	Avocado Green-VY LT	3815	Celadon Green-DK
⌘	611	Drab Brown	3347	Yellow Green-MD
⊕	471	Avocado Green-VY LT	3829	Old Gold-VY DK
*	317	Pewter Gray	318	Steel Gray-LT
⌘	3024	Brown Gray-VY LT	3861	Cocoa-LT
⬆	3346	Hunter Green	470	Avocado Green-LT
✓	3753	Antique Blue-UL VY LT	927	Gray Green-LT
▲	632	Desert Sand-UL VY DK	3861	Cocoa-LT
⊕	729	Old Gold-MD	976	Golden Brown-MD
⌘	973	Canary-BRT	977	Golden Brown-LT
▣	741	Tangerine-MD	973	Canary-BRT
⬆	783	Topaz-MD	922	Copper-LT
⊕	721	Orange Spice-MD	3820	Straw-DK
⊗	783	Topaz-MD	721	Orange Spice-MD
//	721	Orange Spice-MD	301	Mahogany-MD

☛	301	Mahogany-MD	838	Beige Brown-VY DK
★	632	Desert Sand-UL VY DK	3032	Mocha Brown-MD
\$	3032	Mocha Brown-MD	3064	Desert Sand
▼	632	Desert Sand-UL VY DK	646	Beaver Gray-DK
6	3855	Autumn Gold-LT	738	Tan-VY LT
2	3064	Desert Sand	738	Tan-VY LT
◆	535	Ash Gray-VY LT	310	Black
☉	632	Desert Sand-UL VY DK	3787	Brown Gray-DK
●	310	Black	935	Avocado Green-DK
◀	976	Golden Brown-MD	435	Brown-VY LT
✦	415	Pearl Gray	3861	Cocoa-LT
♠	3820	Straw-DK	977	Golden Brown-LT
(3756	Baby Blue-UL VY LT	3753	Antique Blue-UL VY LT
∞	3756	Baby Blue-UL VY LT	3866	Mocha Brown-UL VY LT
~	3866	Mocha Brown-UL VY LT	3770	Tawny-VY LT
□	3866	Mocha Brown-UL VY LT	3072	Beaver Gray-VY LT
3	729	Old Gold-MD	743	Yellow-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	
224	Shell Pink-VY LT	8	3	8	3	7	2
301	Mahogany-MD	53	20	51	20	45	17
310	Black	534	210	509	200	458	180
311	Navy Blue-MD	90	35	86	33	77	30
312	Baby Blue-VY DK	378	148	360	141	324	127
317	Pewter Gray	47	18	45	17	40	15
318	Steel Gray-LT	63	24	60	23	54	21
336	Navy Blue	405	159	386	151	347	136
370	Mustard-MD	46	18	44	17	39	15
407	Desert Sand-DK	42	16	40	15	36	14
414	Steel Gray-DK	41	16	39	15	35	13
415	Pearl Gray	160	62	152	59	137	53
420	Hazelnut Brown-DK	52	20	49	19	44	17
434	Brown-LT	5	1	5	1	5	1
435	Brown-VY LT	103	40	98	38	88	34
445	Lemon-LT	56	22	54	21	48	18
452	Shell Gray-MD	29	11	27	10	25	9
470	Avocado Green-LT	1	1	1	1	1	1
471	Avocado Green-VY LT	18	7	17	6	15	5
501	Blue Green-DK	17	6	16	6	14	5
502	Blue Green	5	1	5	1	4	1
517	Wedgewood-DK	78	30	74	29	67	26
522	Fern Green	3	1	3	1	3	1
524	Fern Green-VY LT	24	9	23	9	21	8
535	Ash Gray-VY LT	108	42	103	40	92	36
611	Drab Brown	26	10	24	9	22	8
612	Drab Brown-LT	9	3	9	3	8	3
632	Desert Sand-UL VY DK	68	26	65	25	58	22
644	Beige Gray-MD	93	36	89	35	80	31
645	Beaver Gray-VY DK	44	17	42	16	37	14
646	Beaver Gray-DK	47	18	45	17	41	16
647	Beaver Gray-MD	21	8	20	7	18	7
676	Old Gold-LT	11	4	10	3	9	3
677	Old Gold-VY LT	11	4	10	3	9	3
721	Orange Spice-MD	38	14	37	14	33	12
726	Topaz-LT	164	64	156	61	141	55
729	Old Gold-MD	184	72	175	68	158	62
738	Tan-VY LT	111	43	105	41	95	37
739	Tan-UL VY LT	49	19	47	18	42	16
741	Tangerine-MD	50	19	48	18	43	16
742	Tangerine-LT	274	107	261	102	235	92
743	Yellow-MD	120	47	114	44	103	40
783	Topaz-MD	38	14	36	14	32	12
793	Cornflower Blue-MD	38	14	36	14	32	12
797	Royal Blue	465	183	443	174	399	157
798	Delft Blue-DK	214	84	204	80	183	72
823	Navy Blue-DK	249	98	238	93	214	84
824	Blue-VY DK	295	116	281	110	252	99
825	Blue-DK	339	133	323	127	291	114
826	Blue-MD	18	7	17	6	15	5
830	Golden Olive-DK	13	5	12	4	11	4
834	Golden Olive-VY LT	30	11	29	11	26	10
838	Beige Brown-VY DK	25	9	24	9	21	8

844	Beaver Brown-UL DK	89	35	85	33	76	29
922	Copper-LT	12	4	11	4	10	3
924	Gray Green--VY DK	213	83	203	79	182	71
926	Gray Green-MD	15	5	15	5	13	5
927	Gray Green-LT	23	9	22	8	20	7
928	Gray Green-VY LT	62	24	59	23	53	20
930	Antique Blue-DK	165	64	158	62	142	55
935	Avocado Green-DK	92	36	87	34	78	30
948	Peach-VY LT	18	7	17	6	15	5
950	Desert Sand-LT	38	14	36	14	32	12
973	Canary-BRT	187	73	178	70	160	62
975	Golden Brown-DK	19	7	18	7	16	6
976	Golden Brown-MD	105	41	100	39	90	35
977	Golden Brown-LT	120	47	114	44	103	40
995	Electric Blue-DK	17	6	16	6	15	5
996	Electric Blue-MD	79	31	75	29	67	26
3021	Brown Gray-VY DK	46	18	44	17	39	15
3024	Brown Gray-VY LT	231	90	220	86	198	77
3031	Mocha Brown-VY DK	22	8	21	8	19	7
3032	Mocha Brown-MD	69	27	65	25	59	23
3041	Antique Violet-MD	23	9	22	8	19	7
3045	Yellow Beige-DK	41	16	39	15	35	13
3064	Desert Sand	36	14	35	13	31	12
3072	Beaver Gray-VY LT	350	137	333	131	300	118
3346	Hunter Green	6	2	5	1	5	1
3347	Yellow Green-MD	5	1	5	1	4	1
3747	Blue Violet-VY LT	43	16	40	15	36	14
3753	Antique Blue-UL VY LT	309	121	295	116	265	104
3756	Baby Blue-UL VY LT	9018	3550	8588	3381	7729	3042
3768	Gray Green-DK	36	14	34	13	30	11
3770	Tawny-VY LT	38	14	36	14	32	12
3774	Desert Sand-VY LT	44	17	42	16	37	14
3781	Mocha Brown-DK	44	17	42	16	37	14
3787	Brown Gray-DK	63	24	60	23	54	21
3799	Pewter Gray-VY DK	100	39	95	37	86	33
3807	Cornflower Blue	26	10	24	9	22	8
3815	Celadon Green-DK	12	4	11	4	10	3
3820	Straw-DK	110	43	104	40	94	37
3822	Straw-LT	27	10	26	10	23	9
3826	Golden Brown	9	3	8	3	7	2
3827	Golden Brown-Pale	45	17	43	16	38	14
3829	Old Gold-VY DK	20	7	19	7	17	6
3843	Electric Blue	345	135	328	129	295	116
3848	Teal Green-MD	42	16	40	15	36	14
3852	Straw-VY DK	21	8	20	7	18	7
3853	Autumn Gold-DK	38	14	36	14	32	12
3855	Autumn Gold-LT	42	16	40	15	36	14
3860	Cocoa	44	17	42	16	37	14
3861	Cocoa-LT	107	42	102	40	92	36
3862	Mocha Beige-DK	44	17	42	16	38	14
3863	Mocha Beige-MD	58	22	56	22	50	19
3864	Mocha Beige-LT	55	21	52	20	47	18
3865	Winter White	18946	7459	18043	7103	16239	6393
3866	Mocha Brown-UL VY LT	790	311	752	296	677	266

Extended thread usage table.

DMC	Name	Usage (cm)	Usage (inch)	Usage (cm)	Usage (inch)	Usage (cm)	Usage (inch)
		10		12		24	
224	Shell Pink-VY LT	13	4	11	3	5	2
301	Mahogany-MD	81	31	68	26	34	13
310	Black	824	324	687	270	344	135
311	Navy Blue-MD	139	54	116	45	58	23
312	Baby Blue-VY DK	583	229	486	191	243	95
317	Pewter Gray	72	27	60	23	30	11
318	Steel Gray-LT	97	38	81	32	41	16
336	Navy Blue	625	245	521	204	260	102
370	Mustard-MD	70	27	59	23	29	11
407	Desert Sand-DK	65	25	54	21	27	11
414	Steel Gray-DK	63	23	53	20	26	10
415	Pearl Gray	247	95	206	80	103	40
420	Hazelnut Brown-DK	79	31	66	26	33	13
434	Brown-LT	9	2	8	2	4	1
435	Brown-VY LT	158	61	132	51	66	26
445	Lemon-LT	86	32	72	27	36	14
452	Shell Gray-MD	45	16	38	14	19	7
470	Avocado Green-LT	2	2	2	2	1	1
471	Avocado Green-VY LT	27	9	23	8	11	4
501	Blue Green-DK	25	9	21	8	11	4
502	Blue Green	7	2	6	2	3	1
517	Wedgewood-DK	121	47	101	39	50	20
522	Fern Green	5	2	5	2	2	1
524	Fern Green-VY LT	38	14	32	12	16	6
535	Ash Gray-VY LT	166	65	138	54	69	27
611	Drab Brown	40	14	33	12	17	6
612	Drab Brown-LT	14	5	12	5	6	2
632	Desert Sand-UL VY DK	104	40	87	33	44	17
644	Beige Gray-MD	144	56	120	47	60	23
645	Beaver Gray-VY DK	67	25	56	21	28	11
646	Beaver Gray-DK	74	29	62	24	31	12
647	Beaver Gray-MD	32	13	27	11	14	5
676	Old Gold-LT	16	5	14	5	7	2
677	Old Gold-VY LT	16	5	14	5	7	2
721	Orange Spice-MD	59	22	50	18	25	9
726	Topaz-LT	254	99	212	83	106	41
729	Old Gold-MD	284	112	237	93	119	47
738	Tan-VY LT	171	67	143	56	71	28
739	Tan-UL VY LT	76	29	63	24	32	12
741	Tangerine-MD	77	29	65	24	32	12
742	Tangerine-LT	423	166	353	138	176	69
743	Yellow-MD	185	72	155	60	77	30
783	Topaz-MD	58	22	48	18	24	9
793	Cornflower Blue-MD	58	22	48	18	24	9
797	Royal Blue	718	283	599	236	299	118
798	Delft Blue-DK	329	130	275	108	137	54
823	Navy Blue-DK	385	151	321	126	161	63
824	Blue-VY DK	454	178	378	149	189	74
825	Blue-DK	524	205	437	171	218	86
826	Blue-MD	27	9	23	8	11	4
830	Golden Olive-DK	20	7	17	6	8	3
834	Golden Olive-VY LT	47	18	39	15	20	8
838	Beige Brown-VY DK	38	14	32	12	16	6

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844	Beaver Brown-UL DK	137	52	114	44	57	22
922	Copper-LT	18	5	15	5	8	2
924	Gray Green--VY DK	328	128	273	107	137	53
926	Gray Green-MD	23	9	20	8	10	4
927	Gray Green-LT	36	13	30	11	15	5
928	Gray Green-VY LT	95	36	80	30	40	15
930	Antique Blue-DK	256	99	213	83	107	41
935	Avocado Green-DK	140	54	117	45	59	23
948	Peach-VY LT	27	9	23	8	11	4
950	Desert Sand-LT	58	22	48	18	24	9
973	Canary-BRT	288	112	240	93	120	47
975	Golden Brown-DK	29	11	24	9	12	5
976	Golden Brown-MD	162	63	135	53	68	26
977	Golden Brown-LT	185	72	155	60	77	30
995	Electric Blue-DK	27	9	23	8	11	4
996	Electric Blue-MD	121	47	101	39	50	20
3021	Brown Gray-VY DK	70	27	59	23	29	11
3024	Brown Gray-VY LT	356	139	297	116	149	58
3031	Mocha Brown-VY DK	34	13	29	11	14	5
3032	Mocha Brown-MD	106	41	89	35	44	17
3041	Antique Violet-MD	34	13	29	11	14	5
3045	Yellow Beige-DK	63	23	53	20	26	10
3064	Desert Sand	56	22	47	18	23	9
3072	Beaver Gray-VY LT	540	212	450	177	225	89
3346	Hunter Green	9	2	8	2	4	1
3347	Yellow Green-MD	7	2	6	2	3	1
3747	Blue Violet-VY LT	65	25	54	21	27	11
3753	Antique Blue-UL VY LT	477	187	398	156	199	78
3756	Baby Blue-UL VY LT	13912	5476	11594	4563	5797	2282
3768	Gray Green-DK	54	20	45	17	23	8
3770	Tawny-VY LT	58	22	48	18	24	9
3774	Desert Sand-VY LT	67	25	56	21	28	11
3781	Mocha Brown-DK	67	25	56	21	28	11
3787	Brown Gray-DK	97	38	81	32	41	16
3799	Pewter Gray-VY DK	155	59	129	50	65	25
3807	Cornflower Blue	40	14	33	12	17	6
3815	Celadon Green-DK	18	5	15	5	8	2
3820	Straw-DK	169	67	141	56	71	28
3822	Straw-LT	41	16	35	14	17	7
3826	Golden Brown	13	4	11	3	5	2
3827	Golden Brown-Pale	68	25	57	21	29	11
3829	Old Gold-VY DK	31	11	26	9	13	5
3843	Electric Blue	531	209	443	174	221	87
3848	Teal Green-MD	65	25	54	21	27	11
3852	Straw-VY DK	32	13	27	11	14	5
3853	Autumn Gold-DK	58	22	48	18	24	9
3855	Autumn Gold-LT	65	25	54	21	27	11
3860	Cocoa	67	25	56	21	28	11
3861	Cocoa-LT	166	65	138	54	69	27
3862	Mocha Beige-DK	68	25	57	21	29	11
3863	Mocha Beige-MD	90	34	75	29	38	14
3864	Mocha Beige-LT	85	32	71	27	35	14
3865	Winter White	29230	11507	24359	9590	12179	4795
3866	Mocha Brown-UL VY LT	1219	479	1016	399	508	200

Extended thread usage table.

DMC	Name	Usage (cm)	Usage (inch)	Usage (cm)	Usage (inch)	Usage (cm)	Usage (inch)
		25		26		27	
224	Shell Pink-VY LT	5	1	5	1	5	1
301	Mahogany-MD	32	12	31	12	30	11
310	Black	330	130	317	125	305	120
311	Navy Blue-MD	55	22	53	21	51	20
312	Baby Blue-VY DK	233	91	224	88	216	85
317	Pewter Gray	29	11	28	10	27	10
318	Steel Gray-LT	39	15	37	15	36	14
336	Navy Blue	250	98	240	94	231	91
370	Mustard-MD	28	11	27	10	26	10
407	Desert Sand-DK	26	10	25	10	24	9
414	Steel Gray-DK	25	9	24	9	23	9
415	Pearl Gray	99	38	95	37	91	35
420	Hazelnut Brown-DK	32	12	30	12	29	11
434	Brown-LT	4	1	3	1	3	1
435	Brown-VY LT	63	24	61	24	59	23
445	Lemon-LT	35	13	33	12	32	12
452	Shell Gray-MD	18	6	17	6	17	6
470	Avocado Green-LT	1	1	1	1	1	1
471	Avocado Green-VY LT	11	4	10	3	10	3
501	Blue Green-DK	10	4	10	3	9	3
502	Blue Green	3	1	3	1	3	1
517	Wedgewood-DK	48	19	46	18	45	17
522	Fern Green	2	1	2	1	2	1
524	Fern Green-VY LT	15	6	15	6	14	5
535	Ash Gray-VY LT	66	26	64	25	61	24
611	Drab Brown	16	6	15	6	15	5
612	Drab Brown-LT	6	2	6	2	5	2
632	Desert Sand-UL VY DK	42	16	40	15	39	15
644	Beige Gray-MD	58	22	55	21	53	21
645	Beaver Gray-VY DK	27	10	26	10	25	9
646	Beaver Gray-DK	30	12	28	11	27	11
647	Beaver Gray-MD	13	5	12	5	12	5
676	Old Gold-LT	6	2	6	2	6	2
677	Old Gold-VY LT	6	2	6	2	6	2
721	Orange Spice-MD	24	9	23	8	22	8
726	Topaz-LT	102	40	98	38	94	37
729	Old Gold-MD	114	45	109	43	105	41
738	Tan-VY LT	68	27	66	26	63	25
739	Tan-UL VY LT	30	12	29	11	28	11
741	Tangerine-MD	31	12	30	11	29	11
742	Tangerine-LT	169	66	163	64	157	61
743	Yellow-MD	74	29	71	28	69	27
783	Topaz-MD	23	9	22	8	21	8
793	Cornflower Blue-MD	23	9	22	8	21	8
797	Royal Blue	287	113	276	109	266	105
798	Delft Blue-DK	132	52	127	50	122	48
823	Navy Blue-DK	154	60	148	58	143	56
824	Blue-VY DK	181	71	174	69	168	66
825	Blue-DK	210	82	201	79	194	76
826	Blue-MD	11	4	10	3	10	3
830	Golden Olive-DK	8	3	8	3	7	3
834	Golden Olive-VY LT	19	7	18	7	17	7
838	Beige Brown-VY DK	15	6	15	6	14	5

844	Beaver Brown-UL DK	55	21	53	20	51	19
922	Copper-LT	7	2	7	2	7	2
924	Gray Green--VY DK	131	51	126	49	121	47
926	Gray Green-MD	9	4	9	3	9	3
927	Gray Green-LT	14	5	14	5	13	5
928	Gray Green-VY LT	38	14	37	14	35	13
930	Antique Blue-DK	102	40	98	38	95	37
935	Avocado Green-DK	56	22	54	21	52	20
948	Peach-VY LT	11	4	10	3	10	3
950	Desert Sand-LT	23	9	22	8	21	8
973	Canary-BRT	115	45	111	43	107	41
975	Golden Brown-DK	12	4	11	4	11	4
976	Golden Brown-MD	65	25	62	24	60	23
977	Golden Brown-LT	74	29	71	28	69	27
995	Electric Blue-DK	11	4	10	3	10	3
996	Electric Blue-MD	48	19	46	18	45	17
3021	Brown Gray-VY DK	28	11	27	10	26	10
3024	Brown Gray-VY LT	143	55	137	53	132	51
3031	Mocha Brown-VY DK	14	5	13	5	13	5
3032	Mocha Brown-MD	42	17	41	16	39	15
3041	Antique Violet-MD	14	5	13	5	13	5
3045	Yellow Beige-DK	25	9	24	9	23	9
3064	Desert Sand	22	9	21	8	21	8
3072	Beaver Gray-VY LT	216	85	208	82	200	79
3346	Hunter Green	4	1	3	1	3	1
3347	Yellow Green-MD	3	1	3	1	3	1
3747	Blue Violet-VY LT	26	10	25	10	24	9
3753	Antique Blue-UL VY LT	191	75	183	72	177	69
3756	Baby Blue-UL VY LT	5565	2190	5351	2106	5153	2028
3768	Gray Green-DK	22	8	21	8	20	7
3770	Tawny-VY LT	23	9	22	8	21	8
3774	Desert Sand-VY LT	27	10	26	10	25	9
3781	Mocha Brown-DK	27	10	26	10	25	9
3787	Brown Gray-DK	39	15	37	15	36	14
3799	Pewter Gray-VY DK	62	24	60	23	57	22
3807	Cornflower Blue	16	6	15	6	15	5
3815	Celadon Green-DK	7	2	7	2	7	2
3820	Straw-DK	68	27	65	26	63	25
3822	Straw-LT	17	6	16	6	15	6
3826	Golden Brown	5	1	5	1	5	1
3827	Golden Brown-Pale	27	10	26	10	25	9
3829	Old Gold-VY DK	12	4	12	4	11	4
3843	Electric Blue	212	84	204	80	197	77
3848	Teal Green-MD	26	10	25	10	24	9
3852	Straw-VY DK	13	5	12	5	12	5
3853	Autumn Gold-DK	23	9	22	8	21	8
3855	Autumn Gold-LT	26	10	25	10	24	9
3860	Cocoa	27	10	26	10	25	9
3861	Cocoa-LT	66	26	64	25	61	24
3862	Mocha Beige-DK	27	10	26	10	25	9
3863	Mocha Beige-MD	36	14	35	13	33	13
3864	Mocha Beige-LT	34	13	33	12	31	12
3865	Winter White	11692	4603	11242	4426	10826	4262
3866	Mocha Brown-UL VY LT	487	192	469	184	451	177

Extended thread usage table.							
DMC	Name	Usage (cm)	Usage (inch)	Usage (cm)	Usage (inch)	Usage (cm)	Usage (inch)
		28		30		32	
224	Shell Pink-VY LT	5	1	4	1	4	1
301	Mahogany-MD	29	11	27	10	25	10
310	Black	294	116	275	108	258	101
311	Navy Blue-MD	50	19	46	18	43	17
312	Baby Blue-VY DK	208	82	194	76	182	71
317	Pewter Gray	26	10	24	9	23	8
318	Steel Gray-LT	35	14	32	13	30	12
336	Navy Blue	223	87	208	82	195	77
370	Mustard-MD	25	10	23	9	22	8
407	Desert Sand-DK	23	9	22	8	20	8
414	Steel Gray-DK	23	8	21	8	20	7
415	Pearl Gray	88	34	82	32	77	30
420	Hazelnut Brown-DK	28	11	26	10	25	10
434	Brown-LT	3	1	3	1	3	1
435	Brown-VY LT	57	22	53	20	50	19
445	Lemon-LT	31	12	29	11	27	10
452	Shell Gray-MD	16	6	15	5	14	5
470	Avocado Green-LT	1	1	1	1	1	1
471	Avocado Green-VY LT	10	3	9	3	8	3
501	Blue Green-DK	9	3	8	3	8	3
502	Blue Green	3	1	2	1	2	1
517	Wedgewood-DK	43	17	40	16	38	15
522	Fern Green	2	1	2	1	2	1
524	Fern Green-VY LT	14	5	13	5	12	5
535	Ash Gray-VY LT	59	23	55	22	52	20
611	Drab Brown	14	5	13	5	12	5
612	Drab Brown-LT	5	2	5	2	5	2
632	Desert Sand-UL VY DK	37	14	35	13	33	12
644	Beige Gray-MD	51	20	48	19	45	17
645	Beaver Gray-VY DK	24	9	22	8	21	8
646	Beaver Gray-DK	26	10	25	10	23	9
647	Beaver Gray-MD	12	5	11	4	10	4
676	Old Gold-LT	6	2	5	2	5	2
677	Old Gold-VY LT	6	2	5	2	5	2
721	Orange Spice-MD	21	8	20	7	19	7
726	Topaz-LT	91	35	85	33	79	31
729	Old Gold-MD	102	40	95	37	89	35
738	Tan-VY LT	61	24	57	22	53	21
739	Tan-UL VY LT	27	10	25	10	24	9
741	Tangerine-MD	28	10	26	10	24	9
742	Tangerine-LT	151	59	141	55	132	52
743	Yellow-MD	66	26	62	24	58	23
783	Topaz-MD	21	8	19	7	18	7
793	Cornflower Blue-MD	21	8	19	7	18	7
797	Royal Blue	257	101	239	94	224	88
798	Delft Blue-DK	118	46	110	43	103	41
823	Navy Blue-DK	138	54	128	50	120	47
824	Blue-VY DK	162	64	151	59	142	56
825	Blue-DK	187	73	175	68	164	64
826	Blue-MD	10	3	9	3	8	3
830	Golden Olive-DK	7	3	7	2	6	2
834	Golden Olive-VY LT	17	6	16	6	15	6
838	Beige Brown-VY DK	14	5	13	5	12	5

844	Beaver Brown-UL DK	49	19	46	17	43	16
922	Copper-LT	6	2	6	2	6	2
924	Gray Green--VY DK	117	46	109	43	102	40
926	Gray Green-MD	8	3	8	3	7	3
927	Gray Green-LT	13	5	12	4	11	4
928	Gray Green-VY LT	34	13	32	12	30	11
930	Antique Blue-DK	91	35	85	33	80	31
935	Avocado Green-DK	50	19	47	18	44	17
948	Peach-VY LT	10	3	9	3	8	3
950	Desert Sand-LT	21	8	19	7	18	7
973	Canary-BRT	103	40	96	37	90	35
975	Golden Brown-DK	10	4	10	4	9	3
976	Golden Brown-MD	58	23	54	21	51	20
977	Golden Brown-LT	66	26	62	24	58	23
995	Electric Blue-DK	10	3	9	3	8	3
996	Electric Blue-MD	43	17	40	16	38	15
3021	Brown Gray-VY DK	25	10	23	9	22	8
3024	Brown Gray-VY LT	127	50	119	46	111	43
3031	Mocha Brown-VY DK	12	5	11	4	11	4
3032	Mocha Brown-MD	38	15	35	14	33	13
3041	Antique Violet-MD	12	5	11	4	11	4
3045	Yellow Beige-DK	23	8	21	8	20	7
3064	Desert Sand	20	8	19	7	17	7
3072	Beaver Gray-VY LT	193	76	180	71	169	66
3346	Hunter Green	3	1	3	1	3	1
3347	Yellow Green-MD	3	1	2	1	2	1
3747	Blue Violet-VY LT	23	9	22	8	20	8
3753	Antique Blue-UL VY LT	170	67	159	62	149	59
3756	Baby Blue-UL VY LT	4969	1956	4637	1825	4348	1711
3768	Gray Green-DK	19	7	18	7	17	6
3770	Tawny-VY LT	21	8	19	7	18	7
3774	Desert Sand-VY LT	24	9	22	8	21	8
3781	Mocha Brown-DK	24	9	22	8	21	8
3787	Brown Gray-DK	35	14	32	13	30	12
3799	Pewter Gray-VY DK	55	21	52	20	48	19
3807	Cornflower Blue	14	5	13	5	12	5
3815	Celadon Green-DK	6	2	6	2	6	2
3820	Straw-DK	60	24	56	22	53	21
3822	Straw-LT	15	6	14	5	13	5
3826	Golden Brown	5	1	4	1	4	1
3827	Golden Brown-Pale	24	9	23	8	21	8
3829	Old Gold-VY DK	11	4	10	4	10	3
3843	Electric Blue	190	75	177	70	166	65
3848	Teal Green-MD	23	9	22	8	20	8
3852	Straw-VY DK	12	5	11	4	10	4
3853	Autumn Gold-DK	21	8	19	7	18	7
3855	Autumn Gold-LT	23	9	22	8	20	8
3860	Cocoa	24	9	22	8	21	8
3861	Cocoa-LT	59	23	55	22	52	20
3862	Mocha Beige-DK	24	9	23	8	21	8
3863	Mocha Beige-MD	32	12	30	11	28	11
3864	Mocha Beige-LT	30	12	28	11	26	10
3865	Winter White	10439	4110	9743	3836	9134	3596
3866	Mocha Brown-UL VY LT	435	171	406	160	381	150

(9)

(9) (10)

$$(10) \quad \mathcal{L}(\mathcal{A}) = \mathcal{L}(\mathcal{B}) \quad (11)$$

$$(11) \quad \mathcal{L}(\mathcal{A}) = \mathcal{L}(\mathcal{B}) \quad (12)$$

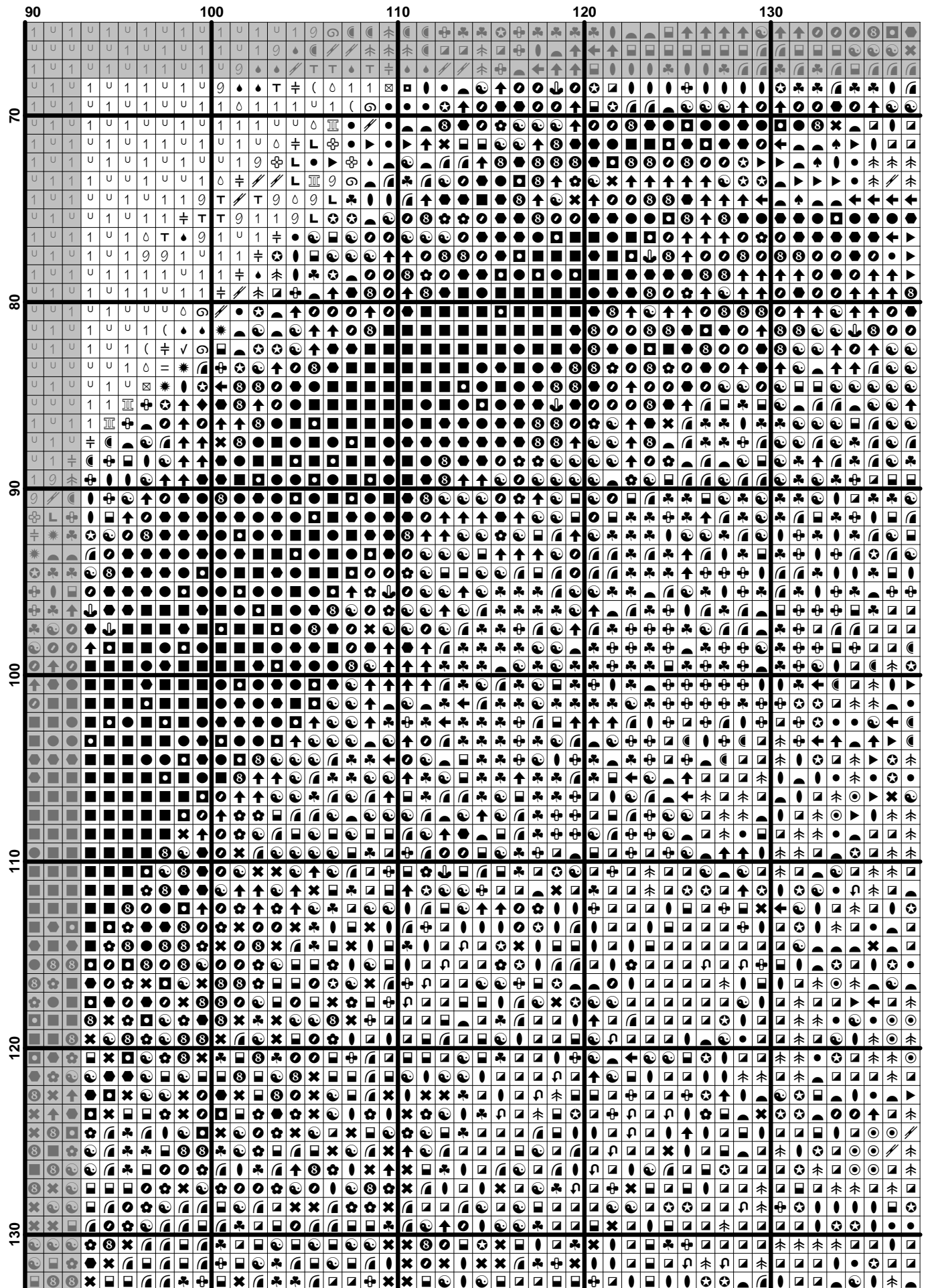
$$(12) \quad \mathcal{L}(\mathcal{A}) = \mathcal{L}(\mathcal{B}) \quad (13)$$

$$(13) \quad \frac{d}{dt} \left(\frac{\partial L}{\partial \dot{x}} \right) = \frac{\partial L}{\partial x}$$

	270	280	290	300
10	0	0	0	0
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	0	0	0	0
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	0	0	0	0
	0	0	0	0

$$(15) \quad \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} f(s) ds = \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} \left(\sum_{k=0}^\infty \frac{(t-s)^k}{k!} f^{(k)}(s) \right) ds$$

[illegible]



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

	180	190	200	210	220
70					
80					
90					
100					
110					
120					
130					

$$(20) \quad \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} f(s) ds = \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} f(s) ds + \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} f(s) ds$$

(21)

	10										20										30										40																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
130	△	1	1	1	1	1	1	1	1	1	△	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

$$(23) \quad \mathcal{L}(\mathcal{A}) = \mathcal{L}(\mathcal{B}) \quad (24)$$

	90	100	110	120	130
130					
140					
150					
160					
170					
180					
190					

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

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

$$(27) \quad \mathcal{L}(\mathcal{A}) = \mathcal{L}(\mathcal{B}) \quad (28)$$

(28)

[illegible]

[illegible]

	90	100	110	120	130
200	90 200 210 220 230 240 250 260	100 200 210 220 230 240 250 260	110 200 210 220 230 240 250 260	120 200 210 220 230 240 250 260	130 200 210 220 230 240 250 260
	90 200 210 220 230 240 250 260	100 200 210 220 230 240 250 260	110 200 210 220 230 240 250 260	120 200 210 220 230 240 250 260	130 200 210 220 230 240 250 260

[illegible]

[illegible]

[illegible]

(35)

[illegible]

$$(37) \quad \mathcal{L}(\mathcal{A}) = \mathcal{L}(\mathcal{B}) \quad (38)$$

[illegible]

[illegible]

[illegible]

$$(41) \quad \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} f(s) ds = \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} \left(\sum_{k=0}^\infty \frac{(t-s)^k}{k!} f^{(k)}(s) \right) ds$$

(42)

$$(43) \quad \frac{1}{\Gamma(\alpha)} \int_0^t (t-s)^{\alpha-1} f(s) ds = \mathcal{I}_\alpha f(t), \quad t \in [0, T],$$

[illegible]

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

[illegible]

[illegible]

[illegible]

(49)

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

390	270	280	290	300
390	U 1 U 1 U U 1 U U U 1	U U 1 U 1 U 1 U 1 U	1 U U 1 U 1 U 1 U	1 U U 1 U 1 U 1 U
	1 U 1 U U 1 U 1 U U	U 1 U 1 U U U 1 U U	U U 1 U 1 U 1 U U	U U 1 U 1 U U U
	U U U U 1 U 1 U 1 U	1 U U U 1 U 1 U 1 U	U 1 U U 1 1 U 1 U	U U 1 U 1 U 1 U
	1 U 1 1 U 1 U 1 U 1 U	1 1 1 U 1 U 1 U 1	1 U U 1 1 U 1 U U	1 U 1 U 1 U U
	U 1 U 1 U 1 U U U 1	1 U U 1 U 1 U 1 U	1 U 1 U 1 U 1 U 1	U 1 U 1 U 1 U
	1 U 1 U 1 U U U U 1	U 1 U 1 U 1 U 1 U	1 1 U 1 U U 1 1 U	1 U 1 U 1 U 1
	U 1 1 U 1 U U U U	1 U U 1 U 1 U 1 U	1 U 1 1 1 1 1 U U	1 U U 1 U U 1
	1 U 1 U U 1 U U U 1	U U 1 U 1 U 1 U 1	1 U 1 U 1 U 1 U 1	U 1 U 1 U 1 U
400	U 1 U U U U 1 U U U	1 U U U U U 1 U U U	1 U U U 1 U 1 U U	1 U U 1 U U 1
	U 1 U U 1 U U U 1	U 1 U 1 U 1 U U 1	U 1 U 1 U 1 1 1 U	1 1 1 U
	1 U 1 U 1 U 1 U U	1 1 U 1 U 1 U 1 U	1 U 1 U U 1 U U U	U U U U
	U 1 U 1 U U 1 U 1 U	1 U 1 U 1 U U U 1	U 1 U 1 1 U U 1 U	U 1 U 1
	1 U 1 U 1 U 1 U 1	1 U 1 U 1 U 1 U 1	1 U 1 U U 1 U U 1	U U 1 U 1
	U 1 U 1 U 1 U 1 U	1 U 1 U 1 U 1 U 1	1 U U U U 1 U U 1	U U U 1
	1 U 1 U 1 U 1 U 1	U U 1 U 1 U 1 U 1	1 U U 1 U U U 1 U	U 1 U U
	1 1 U 1 1 U 1 U 1 U	1 U U 1 U 1 U 1 U	1 U 1 U U 1 U U U	1 U U U 1
	U 1 U 1 1 U 1 U 1	1 U 1 U 1 U 1 U 1	U 1 U 1 U U U U U	U U U U
410	U 1 1 1 U 1 U 1 1 U	1 U U U 1 U 1 U U U	1 U U U U U U U U	U U U U
	1 U 1 1 1 U 1 U 1	U 1 U 1 U 1 U 1 U	U U U 1 1 U U U U	U U U U
	1 1 1 1 U 1 U 1 U	1 U 1 U U U 1 U 1	1 U U U U 1 U U U	U U U U
	1 U U 1 1 1 U 1 1	U 1 U U 1 1 U 1 U	U 1 U 1 U 1 U U U	U U U U
	1 U 1 1 1 1 U 1 1	U 1 U 1 1 U U 1 U	U U U U U U U U	U U U U
	1 U 1 U 1 U 1 1 U	1 U 1 1 1 U 1 U	1 U 1 U 1 U 1 U 1	U 1 U 1
	U 1 U 1 1 1 1 U	1 U 1 U 1 U 1 1	U 1 U 1 U 1 U U 1	U U U 1
	1 U 1 1 U 1 1 1	U 1 U 1 U 1 U 1	U 1 U 1 U 1 U 1	U 1 1 U
	U 1 1 1 U 1 1 1	1 U 1 U 1 U 1 U	U 1 U U 1 U U U	U U U U
420	1 1 1 1 1 1 1 1	U 1 U 1 U 1 1 U 1	1 U 1 U 1 U U 1	U U U 1
	1 1 1 U 1 1 U 1 1	1 U 1 U 1 1 U 1 U	1 U 1 1 U 1 1 U 1	U 1 U 1
	1 U 1 1 1 U 1 1 1	U 1 1 1 1 1 1 U	U 1 1 U 1 1 U 1 1	1 1 1
	1 1 U 1 1 1 U 1 U	U 1 U 1 U 1 1 U 1	1 U U 1 U 1 U 1 U	U 1 U 1
	U 1 U 1 1 1 U 1 U	U 1 1 1 1 1 U U	1 U 1 1 1 1 U 1	U 1 U 1
	1 U 1 U 1 U 1 1	1 1 1 1 1 U 1 1	1 U 1 U 1 U 1 U 1	U 1 U 1
	1 1 1 1 1 1 U	1 U 1 1 U 1 U U 1	U 1 U 1 U 1 U 1	U 1 U 1
	U 1 1 1 1 U 1 U 1	1 1 1 U 1 1 U 1 1	1 1 U 1 1 U 1 U U	U 1 U U
	1 1 U 1 1 1 1 1	1 U 1 1 1 1 U 1	1 U 1 U U 1 U 1 1	U 1 1 1
430	1 U 1 1 U 1 1 1 1	U 1 1 1 1 U 1 1	1 1 1 U 1 U 1 1 U	1 1 1 U
	1 U 1 1 1 U 1 U 1 1	1 U 1 1 1 U 1 1 U	1 U 1 U 1 U 1 U 1	U 1 1 U
	1 1 U 1 U 1 U 1 1	1 1 1 1 U 1 1 U	1 1 U 1 1 1 1 U	U 1 1 U
	1 1 1 U 1 1 U 1 U	U 1 U 1 1 1 1 1	1 1 1 1 U 1 U 1	U 1 U 1
	1 1 1 1 1 U 1 U	U 1 U 1 U 1 U 1 1	1 1 U 1 U 1 U 1 U	U 1 U 1
	1 1 1 U U 1 U 1 U	1 U 1 1 1 1 1 1	1 1 1 1 U 1 1 1 1	1 1 1 1
	1 1 1 U 1 U 1 U 1	U 1 U 1 U 1 1 1 1	1 U 1 U 1 1 1 1 1	U 1 1 1
	1 1 1 U 1 U 1 U	U 1 U 1 U 1 1 1 1	U 1 1 1 U 1 1 1 1	U 1 1 1
440	U 1 1 U 1 U 1 U 1	U 1 U 1 U 1 1 1 U	U 1 1 U 1 U 1 U 1	U 1 1 U
	1 U U 1 U U 1 U 1	U 1 U 1 U 1 U 1 U	1 1 U 1 U 1 U 1 U	U 1 U 1
	1 U 1 1 U 1 U 1 U	1 1 U 1 U 1 U 1 U	1 U 1 U 1 1 U 1 U	U 1 1 U
	1 U 1 U U U U 1 U	U 1 U 1 U 1 U 1 U	1 1 1 1 U 1 1 U 1	U 1 1 U
	U 1 U 1 1 1 U 1	U 1 U 1 U 1 U 1 U	1 1 1 1 1 1 U 1 1	1 1 1
	1 U 1 U 1 U U 1 U	U 1 U 1 U 1 1 U 1	1 U 1 1 1 U 1 1 1	U 1 1 1
	1 1 1 1 1 U 1 1	U 1 U 1 1 U 1 1 U	1 1 1 1 1 1 1 U	U 1 U 1
	U 1 U 1 1 1 1 U	U 1 U 1 U 1 1 1	1 1 1 U 1 1 U 1	U 1 U 1
	1 U 1 U 1 U 1 U	U 1 U 1 U 1 1 1	1 U 1 1 1 U 1 1 1	U 1 1 1
	1 1 1 1 1 U 1 1	U 1 U 1 U 1 1 U	1 1 1 1 1 1 1 U	U 1 U 1
	U 1 U 1 1 1 1 U	U 1 U 1 U 1 1 U	1 1 1 U 1 1 U 1	U 1 U 1
	1 U 1 1 1 1 U	U 1 U 1 U 1 1 U	U 1 1 U 1 U 1 U 1	U 1 1 1