

Bordered Magic Squares Multiples of 10

The work is also available at author's site:

<https://numbers-magic.com/?p=706>

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Abstract

*During past years author worked with **block-wise**, **bordered** and **block-bordered** magic squares. This work make connection between **block-wise** and **bordered** magic squares. We first constructed **bordered** magic squares of orders 120 and 110 multiples of magic square of order 10. Based on these two big magic squares lower order magic squares are obtained. By lower orders we understand that magic squares of orders 100, 90, 80, 70, etc. The construction of the **bordered** magic squares multiples of 10 is based on equal sum blocks of magic squares of order 10. We considered 14 different types of magic square of order 10. The advantage in studying **bordered** magic squares is that when we remove external border, still we left with magic squares with sequential entries. It is the same property of **bordered** magic squares of single digit borders. The difference is that instead of numbers here we have blocks of equal sum magic squares of order 10. For multiples of order 4, 6 and 8 see author's work [24, 25, 26]. The further multiples, such as multiples, 12, 14, etc. shall be done in another works. This work brings examples only up to order 40. Higher orders examples can be seen in **Excel files** attached with the work. The total work is up to order 120.*

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1 Introduction

During past years author [3, 4, 5, 6, 7, 8, 9] worked with **block-wise** magic squares from orders 12 to 47. Author [10, 11, 12, 13, 14, 15] also worked with **bordered** magic squares. The study on **bordered** magic squares is extended to **block-bordered** magic squares [16, 17, 18]. This is specially done for the magic squares of orders p and p , where p is a prime number. This study is still extended to **block-wise bordered** magic squares [19, 20, 21, 22]. Some conection with Pythagorean triples and area-representations are also made [24, 25, 26, 27, 28]. The main property of **bordered** magic squares is that if we remove external borders, still we get **sub-bordered** magic squares, i.e., each layer in itself lead us to magic squares. In many cases, the properties of **bordered** magic square are seperated by **even** and **odd** orders magic squares. In many cases, we get good properties for the **even** order **bordered** magic squares. In many cases, we have to use fractional numbers entries, specially to reach minimum perfect square sum of entries. For more study on **bordered** magic squares refer H. White’s [1] and H. Danielsson’s [2] web-sites.

1.1 Summary of Bordered Magic Squares

1.1.1 Odd Numbers Multiples

- **Single Digit:** Bordered magic squares based on single digit [10, 11, 1].
- **Three Digits:** Bordered magic squares based on magic squares of order 3 [30].
- **Five Digits:** Bordered magic squares multiples of magic squares of order 5 [31].
- **Seven Digits:** Bordered magic squares multiples of magic squares of order 7 [32].
- **Nine Digits:** Bordered magic squares multiples of magic squares of order 9 [33]
- **Eleven Digits:** Bordered magic squares multiples of magic squares of order 11 [34]
- **Thirteen Digits:** Bordered magic squares multiples of magic squares of order 13 [35]
- **Fifteen Digits:** Bordered magic squares multiples of magic squares of order 15 [36]
- **Seventeen Digits:** Bordered magic squares multiples of magic squares of order 17 [37]
- **Nineteen Digits:** Bordered magic squares multiples of magic squares of order 19 [38]

1.1.2 Even Numbers Multiples

- **Two Digits:** Bordered magic squares based on magic rectangles multiples of 2 [78, 79, 67, 68, 68, 69].
- **Four Digits:** Bordered magic squares multiples of magic squares of order 4 [24].
- **Six Digits:** Bordered magic squares multiples of magic squares of order 6 [25]
- **Eight Digits:** Bordered magic squares multiples of magic squares of order 8 [26]
- **Ten Digits:** Bordered magic squares multiples of magic squares of order 10 [27] (This work)

The work on even number multiples is with equal sums blocks of magic squares. The work on odd number multiples is with different sum magic squares.

It is revised and extended version of authors previous work on multiples of 10. Here we have considered 14 different types of magic squares of order 10. The work is here only up to order 40. Higher order examples can be seen in an **excel files** attached with the work.

2 Bordered Magic Squares Multiples of 10

Let's consider following 14 magic squares of order 10.

1	mgc	352	719	579	505	491	370	534	535	460	505
1	64	85	13	99	72	36	50	28	57	505	
43	12	37	9	54	81	98	26	80	65	505	
70	96	23	51	87	48	75	14	2	39	505	
95	88	10	34	21	17	42	59	66	73	505	
38	71	16	90	45	69	4	97	53	22	505	
19	30	62	77	8	56	83	35	94	41	505	
74	49	58	25	20	93	67	82	31	6	505	
52	7	91	46	63	40	29	78	15	84	505	
27	33	44	92	76	5	60	61	89	18	505	
86	55	79	68	32	24	11	3	47	100	505	
505	505	505	505	505	505	505	505	505	505	505	505

2	mgc	612	525	467	386	603	385	541	523	503	505
91	86	16	84	18	14	4	98	2	92	505	
13	26	20	80	82	69	31	71	25	88	505	
89	23	64	62	35	68	36	38	78	12	505	
11	24	34	49	54	43	56	67	77	90	505	
96	29	40	44	55	50	53	61	72	5	505	
1	79	42	58	45	52	47	59	22	100	505	
93	74	60	51	48	57	46	41	27	8	505	
7	73	63	39	66	33	65	37	28	94	505	
95	76	81	21	19	32	70	30	75	6	505	
9	15	85	17	83	87	97	3	99	10	505	
505	505	505	505	505	505	505	505	505	505	505	505

3	mgc	551	520	487	465	639	430	469	506	478	505
		91	86	16	84	18	14	4	98	2	92
		13	47	58	19	78	39	66	27	70	88
		89	22	75	50	55	30	67	42	63	12
		11	82	23	54	43	74	31	62	35	90
		96	51	46	79	26	59	38	71	34	5
		1	48	57	20	77	40	65	28	69	100
		93	21	76	49	56	29	68	41	64	8
		7	81	24	53	44	73	32	61	36	94
		95	52	45	80	25	60	37	72	33	6
		9	15	85	17	83	87	97	3	99	10
		505	505	505	505	505	505	505	505	505	505

4	mgc	514	553	509	548	471	417	693	447	393	505
		3	1	99	97	96	6	94	8	9	92
		98	100	2	4	5	95	7	93	11	90
		25	76	33	67	66	65	34	38	91	10
		75	26	62	40	60	41	43	57	89	12
		27	74	56	55	47	48	52	45	88	13
		73	28	50	46	53	54	49	51	14	87
		72	29	39	58	42	59	61	44	86	15
		70	31	63	37	35	36	64	68	16	85
		32	69	17	83	19	81	24	22	78	80
		30	71	84	18	82	20	77	79	23	21
		505	505	505	505	505	505	505	505	505	505

7	mgc	486	686	403	509	552	395	462	505	547	505
		49	54	43	56	61	40	31	70	18	83
		44	55	50	53	41	60	19	82	5	96
		58	45	52	47	59	42	72	29	94	7
		51	48	57	46	67	34	27	74	99	2
		36	35	62	68	38	64	25	76	95	6
		65	66	39	33	37	63	71	30	10	91
		28	26	80	69	24	79	78	20	88	13
		73	75	21	32	77	22	81	23	8	93
		15	84	12	90	9	98	97	85	1	14
		86	17	89	11	92	3	4	16	87	100
		505	505	505	505	505	505	505	505	505	505

8	mgc	483	718	408	537	509	413	411	485	581	505
		33	67	66	65	34	38	31	70	18	83
		62	40	60	41	43	57	27	74	5	96
		56	55	47	48	52	45	72	29	94	7
		50	46	53	54	49	51	19	82	99	2
		39	58	42	59	61	44	25	76	95	6
		63	37	35	36	64	68	71	30	10	91
		28	26	79	69	24	80	78	20	88	13
		73	75	22	32	77	21	81	23	8	93
		15	84	12	90	9	98	97	85	1	14
		86	17	89	11	92	3	4	16	87	100
		505	505	505	505	505	505	505	505	505	505

7	mgc	486	686	403	509	552	395	462	505	547	505	
		49	54	43	56	61	40	31	70	18	83	505
		44	55	50	53	41	60	19	82	5	96	505
		58	45	52	47	59	42	72	29	94	7	505
		51	48	57	46	67	34	27	74	99	2	505
		36	35	62	68	38	64	25	76	95	6	505
		65	66	39	33	37	63	71	30	10	91	505
		28	26	80	69	24	79	78	20	88	13	505
		73	75	21	32	77	22	81	23	8	93	505
		15	84	12	90	9	98	97	85	1	14	505
		86	17	89	11	92	3	4	16	87	100	505
		505	505	505	505	505	505	505	505	505	505	505

8	mgc	483	718	408	537	509	413	411	485	581	505	
		33	67	66	65	34	38	31	70	18	83	505
		62	40	60	41	43	57	27	74	5	96	505
		56	55	47	48	52	45	72	29	94	7	505
		50	46	53	54	49	51	19	82	99	2	505
		39	58	42	59	61	44	25	76	95	6	505
		63	37	35	36	64	68	71	30	10	91	505
		28	26	79	69	24	80	78	20	88	13	505
		73	75	22	32	77	21	81	23	8	93	505
		15	84	12	90	9	98	97	85	1	14	505
		86	17	89	11	92	3	4	16	87	100	505
		505	505	505	505	505	505	505	505	505	505	505

9	mgc	483	718	392	514	552	413	395	506	572	505	
		38	62	36	68	35	64	31	70	18	83	505
		67	49	54	43	56	34	27	74	5	96	505
		61	44	55	50	53	40	72	29	94	7	505
		41	58	45	52	47	60	19	82	99	2	505
		59	51	48	57	46	42	25	76	95	6	505
		37	39	65	33	66	63	71	30	10	91	505
		28	26	79	69	24	80	78	20	88	13	505
		73	75	22	32	77	21	81	23	8	93	505
		15	84	12	90	9	98	97	85	1	14	505
		86	17	89	11	92	3	4	16	87	100	505
		505	505	505	505	505	505	505	505	505	505	505

10	mgc	452	491	550	500	583	411	466	505	587	505	
		25	78	19	80	33	70	27	72	99	2	505
		20	79	26	77	28	71	34	69	8	93	505
		82	21	76	23	74	29	68	31	94	7	505
		75	24	81	22	67	32	73	30	5	96	505
		41	62	35	64	49	54	43	56	95	6	505
		36	63	42	61	44	55	50	53	18	83	505
		66	37	60	39	58	45	52	47	88	13	505
		59	40	65	38	51	48	57	46	10	91	505
		9	97	12	90	15	84	98	85	1	14	505
		92	4	89	11	86	17	3	16	87	100	505
		505	505	505	505	505	505	505	505	505	505	505

11	mgc	527	643	383	519	581	407	503	434	548	505	
		30	72	73	27	31	69	68	34	18	83	505
		71	29	28	74	70	32	33	67	5	96	505
		19	81	80	22	76	23	77	26	94	7	505
		82	20	21	79	25	78	24	75	99	2	505
		43	57	56	46	39	61	42	60	95	6	505
		58	44	45	55	62	40	59	41	10	91	505
		38	64	65	35	52	50	53	47	88	13	505
		63	37	36	66	49	51	48	54	8	93	505
		12	84	15	90	9	98	97	85	1	14	505
		89	17	86	11	92	3	4	16	87	100	505
		505	505	505	505	505	505	505	505	505	505	505

12	mgc	512	544	493	405	578	407	530	505	571	505	
		52	50	43	55	54	48	45	57	99	2	505
		81	71	25	72	28	78	27	22	18	83	505
		19	37	31	35	65	67	68	82	94	7	505
		26	63	40	59	62	41	38	75	5	96	505
		21	69	61	42	39	60	32	80	95	6	505
		77	33	70	66	36	34	64	24	10	91	505
		79	30	76	29	73	23	74	20	88	13	505
		49	51	58	46	47	53	56	44	8	93	505
		9	90	12	98	15	84	97	85	1	14	505
		92	11	89	3	86	17	4	16	87	100	505
		505	505	505	505	505	505	505	505	505	505	505

13	mgc	501	497	585	500	593	407	425	505	532	505	
		21	19	81	79	78	76	26	24	99	2	505
		80	82	20	22	23	25	75	77	10	91	505
		35	66	49	54	43	56	39	62	94	7	505
		38	63	44	55	50	53	42	59	5	96	505
		65	36	58	45	52	47	61	40	95	6	505
		64	37	51	48	57	46	60	41	18	83	505
		71	73	27	29	34	32	68	70	88	13	505
		30	28	74	72	67	69	33	31	8	93	505
		9	90	12	98	15	84	97	85	1	14	505
		92	11	89	3	86	17	4	16	87	100	505
		505	505	505	505	505	505	505	505	505	505	505

14	mgc	502	597	442	562	464	416	608	588	366	505	
		38	62	35	68	36	64	76	78	21	27	505
		67	49	54	43	56	34	26	70	31	75	505
		61	44	55	50	53	40	28	29	72	73	505
		59	58	45	52	47	42	77	32	69	24	505
		41	51	48	57	46	60	22	71	30	79	505
		37	39	66	33	65	63	74	23	80	25	505
		94	91	95	12	93	4	99	3	9	5	505
		1	13	20	16	86	17	83	82	87	100	505
		11	88	81	85	15	84	18	19	14	90	505
		96	10	6	89	8	97	2	98	92	7	505
		505	505	505	505	505	505	505	505	505	505	505

2.1 Bordered Magic Squares of Orders 110 and 120

Let's consider following distributions of numbers 121 and 144:

1	2	3	4	5	6	7	8	9	10	11
40	41	42	43	44	45	46	47	48	49	12
39	72	73	74	75	76	77	78	79	50	13
38	71	96	97	98	99	100	101	80	51	14
37	70	95	112	113	114	115	102	81	52	15
36	69	94	111	120	121	116	103	82	53	16
35	68	93	110	119	118	117	104	83	54	17
34	67	92	109	108	107	106	105	84	55	18
33	66	91	90	89	88	87	86	85	56	19
32	65	64	63	62	61	60	59	58	57	20
31	30	29	28	27	26	25	24	23	22	21

Table: 11×11 - 121 numbers

1	2	3	4	5	6	7	8	9	10	11	12
44	45	46	47	48	49	50	51	52	53	54	13
43	80	81	82	83	84	85	86	87	88	55	14
42	79	108	109	110	111	112	113	114	89	56	15
41	78	107	128	129	130	131	132	115	90	57	16
40	77	106	127	140	141	142	133	116	91	58	17
39	76	105	126	139	144	143	134	117	92	59	18
38	75	104	125	138	137	136	135	118	93	60	19
37	74	103	124	123	122	121	120	119	94	61	20
36	73	102	101	100	99	98	97	96	95	62	21
35	72	71	70	69	68	67	66	65	64	63	22
34	33	32	31	30	29	28	27	26	25	24	23

Table: 12×12 - 144 numbers

2.2 Equal Sums Distribution for 11

It has total 121 numbers. Let's consider following distribution of equal sums:

$$\begin{aligned}
 D_1 &:= \{1, 2, \dots, 50, 12051, 12052, \dots, 12100\}; & \text{Total Sum } D_1 &:= 605050 \\
 D_2 &:= \{51, 52, \dots, 100, 12001, 12002, \dots, 12050\}; & \text{Total Sum } D_2 &:= 605050 \\
 &\dots & & \dots \\
 &\dots & & \dots \\
 D_{120} &:= \{5951, 5952, \dots, 6000, 6101, 6102, \dots, 6150\}; & \text{Total Sum } D_{120} &:= 605050 \\
 D_{121} &:= \{6001, 6002, \dots, 6050, 6051, 6052, \dots, 6100\}; & \text{Total Sum } D_{121} &:= 605050
 \end{aligned}$$

Below are few examples of magic squares of order 10×10 based on distribution given above.

98											60505	99											60505
	4851	7214	7235	4863	7249	7222	4886	4900	4878	7207	60505		4901	7164	7185	4913	7199	7172	4936	4950	4928	7157	60505
	4893	4862	4887	4859	7204	7231	7248	4876	7230	7215	60505		4943	4912	4937	4909	7154	7181	7198	4926	7180	7165	60505
	7220	7246	4873	7201	7237	4898	7225	4864	4852	4889	60505		7170	7196	4923	7151	7187	4948	7175	4914	4902	4939	60505
	7245	7238	4860	4884	4871	4867	4892	7209	7216	7223	60505		7195	7188	4910	4934	4921	4917	4942	7159	7166	7173	60505
	4888	7221	4866	7240	4895	7219	4854	7247	7203	4872	60505		4938	7171	4916	7190	4945	7169	4904	7197	7153	4922	60505
	4869	4880	7212	7227	4858	7206	7233	4885	7244	4891	60505		4919	4930	7162	7177	4908	7156	7183	4935	7194	4941	60505
	7224	4899	7208	4875	4870	7243	7217	7232	4881	4856	60505		7174	4949	7158	4925	4920	7193	7167	7182	4931	4906	60505
	7202	4857	7241	4896	7213	4890	4879	7228	4865	7234	60505		7152	4907	7191	4946	7163	4940	4929	7178	4915	7184	60505
	4877	4883	4894	7242	7226	4855	7210	7211	7239	4868	60505		4927	4933	4944	7192	7176	4905	7160	7161	7189	4918	60505
	7236	7205	7229	7218	4882	4874	4861	4853	4897	7250	60505		7186	7155	7179	7168	4932	4924	4911	4903	4947	7200	60505
	60505	60505	60505	60505	60505	60505	60505	60505	60505	60505	60505		60505	60505	60505	60505	60505	60505	60505	60505	60505	60505	60505

98											60505
7241	7236	4866	7234	4868	4864	4854	7248	4852	7242	60505	
4863	4876	4870	7230	7232	7219	4881	7221	4875	7238	60505	
7239	4873	7214	7212	4885	7218	4886	4888	7228	4862	60505	
4861	4874	4884	4899	7204	4893	7206	7217	7227	7240	60505	
7246	4879	4890	4894	7205	4900	7203	7211	7222	4855	60505	
4851	7229	4892	7208	4895	7202	4897	7209	4872	7250	60505	
7243	7224	7210	7201	4898	7207	4896	4891	4877	4858	60505	
4857	7223	7213	4889	7216	4883	7215	4887	4878	7244	60505	
7245	7226	7231	4871	4869	4882	7220	4880	7225	4856	60505	
4859	4865	7235	4867	7233	7237	7247	4853	7249	4860	60505	
60505	60505	60505	60505	60505	60505	60505	60505	60505	60505	60505	

99											60505
7191	7186	4916	7184	4918	4914	4904	7198	4902	7192	60505	
4913	4926	4920	7180	7182	7169	4931	7171	4925	7188	60505	
7189	4923	7164	7162	4935	7168	4936	4938	7178	4912	60505	
4911	4924	4934	4949	7154	4943	7156	7167	7177	7190	60505	
7196	4929	4940	4944	7155	4950	7153	7161	7172	4905	60505	
4901	7179	4942	7158	4945	7152	4947	7159	4922	7200	60505	
7193	7174	7160	7151	4948	7157	4946	4941	4927	4908	60505	
4907	7173	7163	4939	7166	4933	7165	4937	4928	7194	60505	
7195	7176	7181	4921	4919	4932	7170	4930	7175	4906	60505	
4909	4915	7185	4917	7183	7187	7197	4903	7199	4910	60505	
60505	60505	60505	60505	60505	60505	60505	60505	60505	60505	60505	

98											60505
7241	7236	4866	7234	4868	4864	4854	7248	4852	7242	60505	
4863	4897	7208	4869	7228	4889	7216	4877	7220	7238	60505	
7239	4872	7225	4900	7205	4880	7217	4892	7213	4862	60505	
4861	7232	4873	7204	4893	7224	4881	7212	4885	7240	60505	
7246	7201	4896	7229	4876	7209	4888	7221	4884	4855	60505	
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7232	4871	7226	4873	7224	4879	7218	4881	7244	4857	60505
7225	4874	7231	4872	7217	4882	7223	4880	4855	7246	60505
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7216	4887	7210	4889	7208	4895	7202	4897	7238	4863	60505
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4859	7247	4862	7240	4865	7234	7248	7235	4851	4864	60505
7242	4854	7239	4861	7236	4867	4853	4866	7237	7250	60505
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7182	4921	7176	4923	7174	4929	7168	4931	7194	4907	60505
7175	4924	7181	4922	7167	4932	7173	4930	4905	7196	60505
4941	7162	4935	7164	4949	7154	4943	7156	7195	4906	60505
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4869	7231	7230	4872	7226	4873	7227	4876	7244	4857	60505
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7213	4887	4886	7216	4899	7201	4898	7204	4858	7243	60505
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4919	7181	7180	4922	7176	4923	7177	4926	7194	4907	60505
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7231	7221	4875	7222	4878	7228	4877	4872	4868	7233	60505	
4869	4887	4881	4885	7215	7217	7218	7232	7244	4857	60505	
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7214	4887	7201	4898	7207	4896	7210	4891	4868	7233	60505	
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4938	7163	4944	7155	4950	7153	4942	7159	4905	7196	60505	
7165	4936	7158	4945	7152	4947	7161	4940	7195	4906	60505	
7164	4937	7151	4948	7157	4946	7160	4941	4918	7183	60505	
7171	7173	4927	4929	4934	4932	7168	7170	7188	4913	60505	
4930	4928	7174	7172	7167	7169	4933	4931	4908	7193	60505	
4909	7190	4912	7198	4915	7184	7197	7185	4901	4914	60505	
7192	4911	7189	4903	7186	4917	4904	4916	7187	7200	60505	
60505	60505	60505	60505	60505	60505	60505	60505	60505	60505	60505	

98										60505	99										60505
4888	7212	4885	7218	4886	7214	7226	7228	4871	4877	60505	4938	7162	4935	7168	4936	7164	7176	7178	4921	4927	60505
7217	4899	7204	4893	7206	4884	4876	7220	4881	7225	60505	7167	4949	7154	4943	7156	4934	4926	7170	4931	7175	60505
7211	4894	7205	4900	7203	4890	4878	4879	7222	7223	60505	7161	4944	7155	4950	7153	4940	4928	4929	7172	7173	60505
7209	7208	4895	7202	4897	4892	7227	4882	7219	4874	60505	7159	7158	4945	7152	4947	4942	7177	4932	7169	4924	60505
4891	7201	4898	7207	4896	7210	4872	7221	4880	7229	60505	4941	7151	4948	7157	4946	7160	4922	7171	4930	7179	60505
4887	4889	7216	4883	7215	7213	7224	4873	7230	4875	60505	4937	4939	7166	4933	7165	7163	7174	4923	7180	4925	60505
7244	7241	7245	4862	7243	4854	7249	4853	4859	4855	60505	7194	7191	7195	4912	7193	4904	7199	4903	4909	4905	60505
4851	4863	4870	4866	7236	4867	7233	7232	7237	7250	60505	4901	4913	4920	4916	7186	4917	7183	7182	7187	7200	60505
4861	7238	7231	7235	4865	7234	4868	4869	4864	7240	60505	4911	7188	7181	7185	4915	7184	4918	4919	4914	7190	60505
7246	4860	4856	7239	4858	7247	4852	7248	7242	4857	60505	7196	4910	4906	7189	4908	7197	4902	7198	7192	4907	60505
60505	60505	60505	60505	60505	60505	60505	60505	60505	60505	60505	60505	60505	60505	60505	60505	60505	60505	60505	60505	60505	60505

In a Table of order 11×11 , total we have 121 numbers. Replacing each number by their respective distribution accordingly given above, we get a magic squares of order 110 multiples of equal sums of magic squares of order 10. Since there are 14 magic squares of order 10, thus, we get 14 magic squares of order 110. See the attached **excel file** for details.

2.3 Equal Sums Distribution for 12

It has total 144 numbers. Let's consider following distribution of equal sums:

$$\begin{aligned}
 D_1 &:= \{1, 2, \dots, 50, 14351, 14352, \dots, 14400\}; & \text{Total Sum } D_1 &:= 720050 \\
 D_2 &:= \{51, 52, \dots, 100, 14301, 14302, \dots, 14350\}; & \text{Total Sum } D_2 &:= 720050 \\
 \dots & \dots \dots & \dots & \dots \\
 \dots & \dots \dots & \dots & \dots \\
 D_{143} &:= \{7101, 7102, \dots, 7150, 7251, 7250, \dots, 7300\}; & \text{Total Sum } D_{143} &:= 720050 \\
 D_{144} &:= \{7151, 7152, \dots, 7200, 7201, 7202, \dots, 7250\}; & \text{Total Sum } D_{144} &:= 720050
 \end{aligned}$$

Below are four examples of magic squares of order 10×10 based on above distributions. These are separately for each magic square of order 6 given above.

85											72005
4201	10164	10185	4213	10199	10172	4236	4250	4228	10157	72005	
4243	4212	4237	4209	10154	10181	10198	4226	10180	10165	72005	
10170	10196	4223	10151	10187	4248	10175	4214	4202	4239	72005	
10195	10188	4210	4234	4221	4217	4242	10159	10166	10173	72005	
4238	10171	4216	10190	4245	10169	4204	10197	10153	4222	72005	
4219	4230	10162	10177	4208	10156	10183	4235	10194	4241	72005	
10174	4249	10158	4225	4220	10193	10167	10182	4231	4206	72005	
10152	4207	10191	4246	10163	4240	4229	10178	4215	10184	72005	
4227	4233	4244	10192	10176	4205	10160	10161	10189	4218	72005	
10186	10155	10179	10168	4232	4224	4211	4203	4247	10200	72005	
72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	

86											72005
4251	10114	10135	4263	10149	10122	4286	4300	4278	10107	72005	
4293	4262	4287	4259	10104	10131	10148	4276	10130	10115	72005	
10120	10146	4273	10101	10137	4298	10125	4264	4252	4289	72005	
10145	10138	4260	4284	4271	4267	4292	10109	10116	10123	72005	
4288	10121	4266	10140	4295	10119	4254	10147	10103	4272	72005	
4269	4280	10112	10127	4258	10106	10133	4285	10144	4291	72005	
10124	4299	10108	4275	4270	10143	10117	10132	4281	4256	72005	
10102	4257	10141	4296	10113	4290	4279	10128	4265	10134	72005	
4277	4283	4294	10142	10126	4255	10110	10111	10139	4268	72005	
10136	10105	10129	10118	4282	4274	4261	4253	4297	10150	72005	
72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	

85											72005
10191	10186	4216	10184	4218	4214	4204	10198	4202	10192	72005	
4213	4226	4220	10180	10182	10169	4231	10171	4225	10188	72005	
10189	4223	10164	10162	4235	10168	4236	4238	10178	4212	72005	
4211	4224	4234	4249	10154	4243	10156	10167	10177	10190	72005	
10196	4229	4240	4244	10155	4250	10153	10161	10172	4205	72005	
4201	10179	4242	10158	4245	10152	4247	10159	4222	10200	72005	
10193	10174	10160	10151	4248	10157	4246	4241	4227	4208	72005	
4207	10173	10163	4239	10166	4233	10165	4237	4228	10194	72005	
10195	10176	10181	4221	4219	4232	10170	4230	10175	4206	72005	
4209	4215	10185	4217	10183	10187	10197	4203	10199	4210	72005	
72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	

86											72005
10141	10136	4266	10134	4268	4264	4254	10148	4252	10142	72005	
4263	4276	4270	10130	10132	10119	4281	10121	4275	10138	72005	
10139	4273	10114	10112	4285	10118	4286	4288	10128	4262	72005	
4261	4274	4284	4299	10104	4293	10106	10117	10127	10140	72005	
10146	4279	4290	4294	10105	4300	10103	10111	10122	4255	72005	
4251	10129	4292	10108	4295	10102	4297	10109	4272	10150	72005	
10143	10124	10110	10101	4298	10107	4296	4291	4277	4258	72005	
4257	10123	10113	4289	10116	4283	10115	4287	4278	10144	72005	
10145	10126	10131	4271	4269	4282	10120	4280	10125	4256	72005	
4259	4265	10135	4267	10133	10137	10147	4253	10149	4260	72005	
72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	

85											72005
10191	10186	4216	10184	4218	4214	4204	10198	4202	10192	72005	
4213	4247	10158	4219	10178	4239	10166	4227	10170	10188	72005	
10189	4222	10175	4250	10155	4230	10167	4242	10163	4212	72005	
4211	10182	4223	10154	4243	10174	4231	10162	4235	10190	72005	
10196	10151	4246	10179	4226	10159	4238	10171	4234	4205	72005	
4201	4248	10157	4220	10177	4240	10165	4228	10169	10200	72005	
10193	4221	10176	4249	10156	4229	10168	4241	10164	4208	72005	
4207	10181	4224	10153	4244	10173	4232	10161	4236	10194	72005	
10195	10152	4245	10180	4225	10160	4237	10172	4233	4206	72005	
4209	4215	10185	4217	10183	10187	10197	4203	10199	4210	72005	
72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005

86											72005
10141	10136	4266	10134	4268	4264	4254	10148	4252	10142	72005	
4263	4297	10108	4269	10128	4289	10116	4277	10120	10138	72005	
10139	4272	10125	4300	10105	4280	10117	4292	10113	4262	72005	
4261	10132	4273	10104	4293	10124	4281	10112	4285	10140	72005	
10146	10101	4296	10129	4276	10109	4288	10121	4284	4255	72005	
4251	4298	10107	4270	10127	4290	10115	4278	10119	10150	72005	
10143	4271	10126	4299	10106	4279	10118	4291	10114	4258	72005	
4257	10131	4274	10103	4294	10123	4282	10111	4286	10144	72005	
10145	10102	4295	10130	4275	10110	4287	10122	4283	4256	72005	
4259	4265	10135	4267	10133	10137	10147	4253	10149	4260	72005	
72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005

85											72005
4203	4201	10199	10197	10196	4206	10194	4208	4209	10192	72005	
10198	10200	4202	4204	4205	10195	4207	10193	4211	10190	72005	
4225	10176	4233	10167	10166	10165	4234	4238	10191	4210	72005	
10175	4226	10162	4240	10160	4241	4243	10157	10189	4212	72005	
4227	10174	10156	10155	4247	4248	10152	4245	10188	4213	72005	
10173	4228	4250	4246	10153	10154	4249	10151	4214	10187	72005	
10172	4229	4239	10158	4242	10159	10161	4244	10186	4215	72005	
10170	4231	10163	4237	4235	4236	10164	10168	4216	10185	72005	
4232	10169	4217	10183	4219	10181	4224	4222	10178	10180	72005	
4230	10171	10184	4218	10182	4220	10177	10179	4223	4221	72005	
72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005

86											72005
4253	4251	10149	10147	10146	4256	10144	4258	4259	10142	72005	
10148	10150	4252	4254	4255	10145	4257	10143	4261	10140	72005	
4275	10126	4283	10117	10116	10115	4284	4288	10141	4260	72005	
10125	4276	10112	4290	10110	4291	4293	10107	10139	4262	72005	
4277	10124	10106	10105	4297	4298	10102	4295	10138	4263	72005	
10123	4278	4300	4296	10103	10104	4299	10101	4264	10137	72005	
10122	4279	4289	10108	4292	10109	10111	4294	10136	4265	72005	
10120	4281	10113	4287	4285	4286	10114	10118	4266	10135	72005	
4282	10119	4267	10133	4269	10131	4274	4272	10128	10130	72005	
4280	10121	10134	4268	10132	4270	10127	10129	4273	4271	72005	
72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005

85											72005
4203	4201	10199	10197	10196	4206	10194	4208	4209	10192	72005	
10198	10200	4202	4204	4205	10195	4207	10193	4211	10190	72005	
4225	10176	4238	10162	4235	10168	4236	10164	10191	4210	72005	
10175	4226	10167	4249	10154	4243	10156	4234	10189	4212	72005	
4227	10174	10161	4244	10155	4250	10153	4240	10188	4213	72005	
10173	4228	10159	10158	4245	10152	4247	4242	4214	10187	72005	
10172	4229	4241	10151	4248	10157	4246	10160	10186	4215	72005	
10170	4231	4237	4239	10166	4233	10165	10163	4216	10185	72005	
4232	10169	4217	10183	4219	10181	4224	4222	10178	10180	72005	
4230	10171	10184	4218	10182	4220	10177	10179	4223	4221	72005	
72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	

86											72005
4253	4251	10149	10147	10146	4256	10144	4258	4259	10142	72005	
10148	10150	4252	4254	4255	10145	4257	10143	4261	10140	72005	
4275	10126	4288	10112	4285	10118	4286	10114	10141	4260	72005	
10125	4276	10117	4299	10104	4293	10106	4284	10139	4262	72005	
4277	10124	10111	4294	10105	4300	10103	4290	10138	4263	72005	
10123	4278	10109	10108	4295	10102	4297	4292	4264	10137	72005	
10122	4279	4291	10101	4298	10107	4296	10110	10136	4265	72005	
10120	4281	4287	4289	10116	4283	10115	10113	4266	10135	72005	
4282	10119	4267	10133	4269	10131	4274	4272	10128	10130	72005	
4280	10121	10134	4268	10132	4270	10127	10129	4273	4271	72005	
72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	

85											72005
10191	10184	10186	10198	4218	4216	4214	4204	4202	10192	72005	
4213	4221	4219	10181	10179	10178	10176	4226	4224	10188	72005	
4211	10180	10182	4220	4222	4223	4225	10175	10177	10190	72005	
4207	4235	10166	4249	10154	4243	10156	4239	10162	10194	72005	
4201	4238	10163	4244	10155	4250	10153	4242	10159	10200	72005	
10189	10165	4236	10158	4245	10152	4247	10161	4240	4212	72005	
10193	10164	4237	10151	4248	10157	4246	10160	4241	4208	72005	
10195	10171	10173	4227	4229	4234	4232	10168	10170	4206	72005	
10196	4230	4228	10174	10172	10167	10169	4233	4231	4205	72005	
4209	4217	4215	4203	10183	10185	10187	10197	10199	4210	72005	
72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	

86											72005
10141	10134	10136	10148	4268	4266	4264	4254	4252	10142	72005	
4263	4271	4269	10131	10129	10128	10126	4276	4274	10138	72005	
4261	10130	10132	4270	4272	4273	4275	10125	10127	10140	72005	
4257	4285	10116	4299	10104	4293	10106	4289	10112	10144	72005	
4251	4288	10113	4294	10105	4300	10103	4292	10109	10150	72005	
10139	10115	4286	10108	4295	10102	4297	10111	4290	4262	72005	
10143	10114	4287	10101	4298	10107	4296	10110	4291	4258	72005	
10145	10121	10123	4277	4279	4284	4282	10118	10120	4256	72005	
10146	4280	4278	10124	10122	10117	10119	4283	4281	4255	72005	
4259	4267	4265	4253	10133	10135	10137	10147	10149	4260	72005	
72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	

85										72005
4249	10154	4243	10156	10161	4240	4231	10170	4218	10183	72005
4244	10155	4250	10153	4241	10160	4219	10182	4205	10196	72005
10158	4245	10152	4247	10159	4242	10172	4229	10194	4207	72005
10151	4248	10157	4246	10167	4234	4227	10174	10199	4202	72005
4236	4235	10162	10168	4238	10164	4225	10176	10195	4206	72005
10165	10166	4239	4233	4237	10163	10171	4230	4210	10191	72005
4228	4226	10180	10169	4224	10179	10178	4220	10188	4213	72005
10173	10175	4221	4232	10177	4222	10181	4223	4208	10193	72005
4215	10184	4212	10190	4209	10198	10197	10185	4201	4214	72005
10186	4217	10189	4211	10192	4203	4204	4216	10187	10200	72005
72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005

86										72005
4299	10104	4293	10106	10111	4290	4281	10120	4268	10133	72005
4294	10105	4300	10103	4291	10110	4269	10132	4255	10146	72005
10108	4295	10102	4297	10109	4292	10122	4279	10144	4257	72005
10101	4298	10107	4296	10117	4284	4277	10124	10149	4252	72005
4286	4285	10112	10118	4288	10114	4275	10126	10145	4256	72005
10115	10116	4289	4283	4287	10113	10121	4280	4260	10141	72005
4278	4276	10130	10119	4274	10129	10128	4270	10138	4263	72005
10123	10125	4271	4282	10127	4272	10131	4273	4258	10143	72005
4265	10134	4262	10140	4259	10148	10147	10135	4251	4264	72005
10136	4267	10139	4261	10142	4253	4254	4266	10137	10150	72005
72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005

85										72005
4233	10167	10166	10165	4234	4238	4231	10170	4218	10183	72005
10162	4240	10160	4241	4243	10157	4227	10174	4205	10196	72005
10156	10155	4247	4248	10152	4245	10172	4229	10194	4207	72005
4250	4246	10153	10154	4249	10151	4219	10182	10199	4202	72005
4239	10158	4242	10159	10161	4244	4225	10176	10195	4206	72005
10163	4237	4235	4236	10164	10168	10171	4230	4210	10191	72005
4228	4226	10179	10169	4224	10180	10178	4220	10188	4213	72005
10173	10175	4222	4232	10177	4221	10181	4223	4208	10193	72005
4215	10184	4212	10190	4209	10198	10197	10185	4201	4214	72005
10186	4217	10189	4211	10192	4203	4204	4216	10187	10200	72005
72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005

86										72005
4283	10117	10116	10115	4284	4288	4281	10120	4268	10133	72005
10112	4290	10110	4291	4293	10107	4277	10124	4255	10146	72005
10106	10105	4297	4298	10102	4295	10122	4279	10144	4257	72005
4300	4296	10103	10104	4299	10101	4269	10132	10149	4252	72005
4289	10108	4292	10109	10111	4294	4275	10126	10145	4256	72005
10113	4287	4285	4286	10114	10118	10121	4280	4260	10141	72005
4278	4276	10129	10119	4274	10130	10128	4270	10138	4263	72005
10123	10125	4272	4282	10127	4271	10131	4273	4258	10143	72005
4265	10134	4262	10140	4259	10148	10147	10135	4251	4264	72005
10136	4267	10139	4261	10142	4253	4254	4266	10137	10150	72005
72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005

85										72005
4238	10162	4236	10168	4235	10164	4231	10170	4218	10183	72005
10167	4249	10154	4243	10156	4234	4227	10174	4205	10196	72005
10161	4244	10155	4250	10153	4240	10172	4229	10194	4207	72005
4241	10158	4245	10152	4247	10160	4219	10182	10199	4202	72005
10159	10151	4248	10157	4246	4242	4225	10176	10195	4206	72005
4237	4239	10165	4233	10166	10163	10171	4230	4210	10191	72005
4228	4226	10179	10169	4224	10180	10178	4220	10188	4213	72005
10173	10175	4222	4232	10177	4221	10181	4223	4208	10193	72005
4215	10184	4212	10190	4209	10198	10197	10185	4201	4214	72005
10186	4217	10189	4211	10192	4203	4204	4216	10187	10200	72005
72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005

86										72005
4288	10112	4286	10118	4285	10114	4281	10120	4268	10133	72005
10117	4299	10104	4293	10106	4284	4277	10124	4255	10146	72005
10111	4294	10105	4300	10103	4290	10122	4279	10144	4257	72005
4291	10108	4295	10102	4297	10110	4269	10132	10149	4252	72005
10109	10101	4298	10107	4296	4292	4275	10126	10145	4256	72005
4287	4289	10115	4283	10116	10113	10121	4280	4260	10141	72005
4278	4276	10129	10119	4274	10130	10128	4270	10138	4263	72005
10123	10125	4272	4282	10127	4271	10131	4273	4258	10143	72005
4265	10134	4262	10140	4259	10148	10147	10135	4251	4264	72005
10136	4267	10139	4261	10142	4253	4254	4266	10137	10150	72005
72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005

85										72005
4225	10178	4219	10180	4233	10170	4227	10172	10199	4202	72005
4220	10179	4226	10177	4228	10171	4234	10169	4208	10193	72005
10182	4221	10176	4223	10174	4229	10168	4231	10194	4207	72005
10175	4224	10181	4222	10167	4232	10173	4230	4205	10196	72005
4241	10162	4235	10164	4249	10154	4243	10156	10195	4206	72005
4236	10163	4242	10161	4244	10155	4250	10153	4218	10183	72005
10166	4237	10160	4239	10158	4245	10152	4247	10188	4213	72005
10159	4240	10165	4238	10151	4248	10157	4246	4210	10191	72005
4209	10197	4212	10190	4215	10184	10198	10185	4201	4214	72005
10192	4204	10189	4211	10186	4217	4203	4216	10187	10200	72005
72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005

86										72005
4275	10128	4269	10130	4283	10120	4277	10122	10149	4252	72005
4270	10129	4276	10127	4278	10121	4284	10119	4258	10143	72005
10132	4271	10126	4273	10124	4279	10118	4281	10144	4257	72005
10125	4274	10131	4272	10117	4282	10123	4280	4255	10146	72005
4291	10112	4285	10114	4299	10104	4293	10106	10145	4256	72005
4286	10113	4292	10111	4294	10105	4300	10103	4268	10133	72005
10116	4287	10110	4289	10108	4295	10102	4297	10138	4263	72005
10109	4290	10115	4288	10101	4298	10107	4296	4260	10141	72005
4259	10147	4262	10140	4265	10134	10148	10135	4251	4264	72005
10142	4254	10139	4261	10136	4267	4253	4266	10137	10150	72005
72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005

85										72005	86										72005
4230	10172	10173	4227	4231	10169	10168	4234	4218	10183	72005	4280	10122	10123	4277	4281	10119	10118	4284	4268	10133	72005
10171	4229	4228	10174	10170	4232	4233	10167	4205	10196	72005	10121	4279	4278	10124	10120	4282	4283	10117	4255	10146	72005
4219	10181	10180	4222	10176	4223	10177	4226	10194	4207	72005	4269	10131	10130	4272	10126	4273	10127	4276	10144	4257	72005
10182	4220	4221	10179	4225	10178	4224	10175	10199	4202	72005	10132	4270	4271	10129	4275	10128	4274	10125	10149	4252	72005
4243	10157	10156	4246	4239	10161	4242	10160	10195	4206	72005	4293	10107	10106	4296	4289	10111	4292	10110	10145	4256	72005
10158	4244	4245	10155	10162	4240	10159	4241	4210	10191	72005	10108	4294	4295	10105	10112	4290	10109	4291	4260	10141	72005
4238	10164	10165	4235	10152	4250	10153	4247	10188	4213	72005	4288	10114	10115	4285	10102	4300	10103	4297	10138	4263	72005
10163	4237	4236	10166	4249	10151	4248	10154	4208	10193	72005	10113	4287	4286	10116	4299	10101	4298	10104	4258	10143	72005
4212	10184	4215	10190	4209	10198	10197	10185	4201	4214	72005	4262	10134	4265	10140	4259	10148	10147	10135	4251	4264	72005
10189	4217	10186	4211	10192	4203	4204	4216	10187	10200	72005	10139	4267	10136	4261	10142	4253	4254	4266	10137	10150	72005
72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005

85										72005	86										72005
10152	4250	4243	10155	10154	4248	4245	10157	10199	4202	72005	10102	4300	4293	10105	10104	4298	4295	10107	10149	4252	72005
10181	10171	4225	10172	4228	10178	4227	4222	4218	10183	72005	10131	10121	4275	10122	4278	10128	4277	4272	4268	10133	72005
4219	4237	4231	4235	10165	10167	10168	10182	10194	4207	72005	4269	4287	4281	4285	10115	10117	10118	10132	10144	4257	72005
4226	10163	4240	10159	10162	4241	4238	10175	4205	10196	72005	4276	10113	4290	10109	10112	4291	4288	10125	4255	10146	72005
4221	10169	10161	4242	4239	10160	4232	10180	10195	4206	72005	4271	10119	10111	4292	4289	10110	4282	10130	10145	4256	72005
10177	4233	10170	10166	4236	4234	10164	4224	4210	10191	72005	10127	4283	10120	10116	4286	4284	10114	4274	4260	10141	72005
10179	4230	10176	4229	10173	4223	10174	4220	10188	4213	72005	10129	4280	10126	4279	10123	4273	10124	4270	10138	4263	72005
4249	10151	10158	4246	4247	10153	10156	4244	4208	10193	72005	4299	10101	10108	4296	4297	10103	10106	4294	4258	10143	72005
4209	10190	4212	10198	4215	10184	10197	10185	4201	4214	72005	4259	10140	4262	10148	4265	10134	10147	10135	4251	4264	72005
10192	4211	10189	4203	10186	4217	4204	4216	10187	10200	72005	10142	4261	10139	4253	10136	4267	4254	4266	10137	10150	72005
72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005

85										72005	86										72005
4221	4219	10181	10179	10178	10176	4226	4224	10199	4202	72005	4271	4269	10131	10129	10128	10126	4276	4274	10149	4252	72005
10180	10182	4220	4222	4223	4225	10175	10177	4210	10191	72005	10130	10132	4270	4272	4273	4275	10125	10127	4260	10141	72005
4235	10166	4249	10154	4243	10156	4239	10162	10194	4207	72005	4285	10116	4299	10104	4293	10106	4289	10112	10144	4257	72005
4238	10163	4244	10155	4250	10153	4242	10159	4205	10196	72005	4288	10113	4294	10105	4300	10103	4292	10109	4255	10146	72005
10165	4236	10158	4245	10152	4247	10161	4240	10195	4206	72005	10115	4286	10108	4295	10102	4297	10111	4290	10145	4256	72005
10164	4237	10151	4248	10157	4246	10160	4241	4218	10183	72005	10114	4287	10101	4298	10107	4296	10110	4291	4268	10133	72005
10171	10173	4227	4229	4234	4232	10168	10170	10188	4213	72005	10121	10123	4277	4279	4284	4282	10118	10120	10138	4263	72005
4230	4228	10174	10172	10167	10169	4233	4231	4208	10193	72005	4280	4278	10124	10122	10117	10119	4283	4281	4258	10143	72005
4209	10190	4212	10198	4215	10184	10197	10185	4201	4214	72005	4259	10140	4262	10148	4265	10134	10147	10135	4251	4264	72005
10192	4211	10189	4203	10186	4217	4204	4216	10187	10200	72005	10142	4261	10139	4253	10136	4267	4254	4266	10137	10150	72005
72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005

85										72005	86										72005
4238	10162	4235	10168	4236	10164	10176	10178	4221	4227	72005	4288	10112	4285	10118	4286	10114	10126	10128	4271	4277	72005
10167	4249	10154	4243	10156	4234	4226	10170	4231	10175	72005	10117	4299	10104	4293	10106	4284	4276	10120	4281	10125	72005
10161	4244	10155	4250	10153	4240	4228	4229	10172	10173	72005	10111	4294	10105	4300	10103	4290	4278	4279	10122	10123	72005
10159	10158	4245	10152	4247	4242	10177	4232	10169	4224	72005	10109	10108	4295	10102	4297	4292	10127	4282	10119	4274	72005
4241	10151	4248	10157	4246	10160	4222	10171	4230	10179	72005	4291	10101	4298	10107	4296	10110	4272	10121	4280	10129	72005
4237	4239	10166	4233	10165	10163	10174	4223	10180	4225	72005	4287	4289	10116	4283	10115	10113	10124	4273	10130	4275	72005
10194	10191	10195	4212	10193	4204	10199	4203	4209	4205	72005	10144	10141	10145	4262	10143	4254	10149	4253	4259	4255	72005
4201	4213	4220	4216	10186	4217	10183	10182	10187	10200	72005	4251	4263	4270	4266	10136	4267	10133	10132	10137	10150	72005
4211	10188	10181	10185	4215	10184	4218	4219	4214	10190	72005	4261	10138	10131	10135	4265	10134	4268	4269	4264	10140	72005
10196	4210	4206	10189	4208	10197	4202	10198	10192	4207	72005	10146	4260	4256	10139	4258	10147	4252	10148	10142	4257	72005
72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005	72005

In a Table of order 12×12 , total we have 144 numbers. Replacing each number by their respective distribution accordingly given above, we get a magic squares of order 120 multiples of equal sums of magic squares of order 10. Since there are 14 magic squares of order 10, thus, we get 14 magic squares of order 120. See the attached **excel file** for details.

In the magic squares orders 110 and 120, the distribution is considered in such a way that removing the external border of

order 10, still we are left with magic squares of lower orders. Based on this idea, below we shall give some examples of magic squares up to order 40 derived from the above two big magic squares. For complete work see the attached **excel files**.

2.4 Magic Squares of Order 40

Below are two examples of magic squares of order 40 obtained from magic squares of order 120. It is obtained by the application of the formula $\frac{a^2 - b^2}{2}$, $a > b$, i.e., subtract $\frac{120^2 - 40^2}{2} := 6400$ from each entry of magic square order 120, we get the following two magic squares of order 40:

3	mgc	34904	32080	29248	31860	37256	28320	29176	32024	32612	32020	35704	32080	28448	31860	39456	28120	28376	32024	32012	32020	35504	32080	28648	31860	39456	28720	28576	32024	31612	32020	34704	32080	29448	31860	38056	29720	29376	32024	31412	32020
1591	1586	16	1584	18	14	4	1598	2	1592	1541	1536	66	1534	68	64	54	1548	52	1542	1491	1486	116	1484	118	114	104	1498	102	1492	1441	1436	166	1434	168	164	154	1448	152	1442	32020	
13	47	1558	19	1578	39	1566	27	1570	1588	63	97	1508	69	1528	89	1516	77	1520	1538	113	147	1458	119	1478	139	1466	127	1470	1488	163	197	1408	169	1428	189	1416	177	1420	1438	32020	
1589	22	1575	50	1555	30	1567	42	1563	12	1539	72	1525	100	1505	80	1517	92	1513	62	1489	122	1475	150	1455	130	1467	142	1463	112	1439	172	1425	200	1405	180	1417	192	1413	162	32020	
11	1582	23	1554	43	1574	31	1562	35	1590	61	1532	73	1504	93	1524	81	1512	85	1540	111	1482	123	1454	143	1474	131	1462	135	1490	161	1432	173	1404	193	1424	181	1412	185	1440	32020	
1596	1551	46	1579	26	1559	38	1571	34	5	1546	1501	96	1529	76	1509	88	1521	84	55	1496	1451	146	1479	126	1459	138	1471	134	105	1446	1401	196	1429	176	1409	188	1421	184	155	32020	
1	48	1557	20	1577	40	1565	28	1569	1600	51	98	1507	70	1527	90	1515	78	1519	1550	101	148	1457	120	1477	140	1465	128	1469	1500	151	198	1407	170	1427	190	1415	178	1419	1450	32020	
1593	21	1576	49	1556	29	1568	41	1564	8	1543	71	1526	99	1506	79	1518	91	1514	58	1493	121	1476	149	1456	129	1468	141	1464	108	1443	171	1426	199	1406	179	1418	191	1414	158	32020	
7	1581	24	1553	44	1573	32	1561	36	1594	57	1531	74	1503	94	1523	82	1511	86	1544	107	1481	124	1453	144	1473	132	1461	136	1494	147	1431	174	1403	194	1423	182	1411	186	1444	32020	
1595	1552	45	1580	25	1560	37	1572	33	6	1545	1502	95	1530	75	1510	87	1522	83	56	1495	1452	145	1480	125	1460	137	1472	133	106	1445	1402	195	1430	175	1410	187	1422	183	156	32020	
9	15	1585	17	1583	1587	1597	3	1599	10	59	65	1535	67	1533	1537	1547	53	1549	60	109	115	1485	117	1483	1487	1497	103	1499	110	159	165	1435	167	1433	1437	1447	153	1449	160	32020	
1041	1036	566	1034	568	564	554	1048	552	1042	991	986	616	984	618	614	604	998	602	992	941	936	666	934	668	664	654	948	652	942	1391	1386	216	1384	218	214	204	1398	202	1392	32020	
563	597	1008	569	1028	589	1016	577	1020	1038	613	647	958	619	978	639	966	627	970	988	663	697	908	669	928	689	916	677	920	938	213	247	1358	219	1378	239	1366	227	1370	1388	32020	
1039	572	1025	600	1005	580	1017	592	1013	562	989	622	975	650	955	630	967	642	963	612	939	672	925	700	905	680	917	692	913	662	1389	222	1375	250	1355	230	1367	242	1363	212	32020	
561	1032	573	1004	593	1024	581	1012	585	1040	611	982	623	954	643	974	631	962	635	990	661	932	673	904	693	924	681	912	685	940	211	1382	223	1354	243	1374	231	1362	235	1390	32020	
1046	1001	596	1029	576	1009	588	1021	584	555	996	951	646	979	626	959	638	971	634	605	946	901	696	929	676	909	688	921	684	655	1396	1351	246	1379	226	1359	238	1371	234	205	32020	
551	598	1007	570	1027	590	1015	578	1019	1050	601	648	957	620	977	640	965	628	969	1000	651	698	907	670	927	690	915	678	919	950	201	248	1357	220	1377	240	1365	228	1369	1400	32020	
1043	571	1026	599	1006	579	1018	591	1014	558	993	621	976	649	956	629	968	641	964	608	943	671	926	699	906	679	918	691	914	658	1393	221	1376	249	1356	229	1368	241	1364	208	32020	
557	1031	574	1003	594	1023	582	1011	586	1044	607	981	624	953	644	973	632	961	636	994	657	931	674	903	694	923	682	911	686	944	207	1381	224	1353	244	1373	232	1361	236	1394	32020	
1045	1002	595	1030	575	1010	587	1022	583	556	995	952	645	980	625	960	637	972	633	606	945	902	695	930	675	910	687	922	683	656	1395	1352	245	1380	225	1360	237	1372	233	206	32020	
559	565	1035	567	1033	1037	1047	553	1049	560	609	615	985	617	983	987	997	603	999	610	659	665	935	667	933	937	947	653	949	660	209	215	1385	217	1383	1387	1397	203	1399	210	32020	
1091	1086	516	1084	518	514	504	1098	502	1092	841	836	766	834	768	764	754	848	752	842	891	886	716	884	718	714	704	898	702	892	1341	1336	266	1334	268	264	254	1348	252	1342	32020	
513	547	1058	519	1078	539	1066	527	1070	1088	763	797	808	769	828	789	816	777	820	838	713	747	858	719	878	739	866	727	870	888	263	297	1308	269	1328	289	1316	277	1320	1338	32020	
1089	522	1075	550	1055	530	1067	542	1063	512	839	772	825	800	805	780	817	792	813	762	889	722	875	750	855	730	867	742	863	712	1339	272	1325	300	1305	280	1317	292	1313	262	32020	
511	1082	523	1054	543	1074	531	1062	535	1090	761	832	773	804	793	824	781	812	785	840	711	882	723	854	743	874	731	862	735	890	261	1332	273	1304	293	1324	281	1312	285	1340	32020	
1096	1051	546	1079	526	1059	538	1071	534	505	846	801	796	829	776	809	788	821	784	755	896	851	746	879	726	859	738	871	734	705	1346	1301	296	1329	276	1309	288	1321	284	255	32020	
501	548	1057	520	1077	540	1065	528	1069	1100	751	798	807	770	827	790	815	778	819	850	701	748	857	720	877	740	865	728	869	900	251	298	1307	270	1327	290	1315	278	1319	1350	32020	
1093	521	1076	549	1056	529	1068	541	1064	508	843	771	826	799	806	779	818	791	814	758	893	721	876	749	856	729	868	741	864	708	1343	271	1326	299	1306	279	1318	291	1314	258	32020	
507	1081	524	1053	544	1073	532	1061	536	1094	757	831	774	803	794	823	782	811	786	844	707	881	724	853	744	873	732	861	736	894	257	1331	274	1303	294	1323	282	1311	286	1344	32020	
1095	1052	545	1080	525	1060	537	1072	533	506	845	802	795	830	775	810	787	822	783	756	895	852	745	880	725	860	737	872	733	706	1345	1302	295	1330	275	1310	287	1322	283	256	32020	
509	515	1085	517	1083	1087	1097	503	1099	510	759	765	835	767	833	837	847	753	849	760	709	715	885	717	883	887	897	703	899	710	259	265	1335	267	1333	1337	1347	253	1349	260	32020	
1141	1136	466	1134	468	464	454	1148	452	1142	1191	1186	416	1184	418	414	404	1198	402	1192	1241	1236	366	1234	368	364	354	1248	352	1242	1291	1286	316	1284	318	314	304	1298	302	1292	32020	
463	497	1108	469	1128	489	1116	477	1120	1138	413	447	1158	419	1178	439	1166	427	1170	1188	363	397	1208	369	1228	389	1216	377	1220	1238	313	347	1258	319	1278	339	1266	327	1270	1288	32020	
1139	472	1125	500	1105	480	1117	492	1113	462	1189	422	1175	450	1155	430	1167	442	1163	412	1239	372	1225	400	1205	380	1217	392	1213	362	1289	322	1275	350	1255	330	1267	342	1263	312	32020	
461	1132	473	1104	493	1124	481	1112	485	1140	411	1182	423	1154	443	1174	431	1162	435	1190	361	1232	373	1204																		

5	mgc	31292	34300	28628	37660	27784	33068	37404	31768	25576	32020	31892	35700	25228	39260	28184	31868	39604	31768	24576	32020	32292	35900	24428	38860	29184	31068	39604	31768	25376	32020	32492	35300	25428	37260	30384	30668	38204	31768	27176	32020
3	1	1599	1597	1596	6	1594	8	9	1592	53	51	1549	1547	1546	56	1544	58	59	1542	103	101	1499	1497	1496	106	1494	108	109	1492	153	151	1449	1447	1446	156	1444	158	159	1442	32020	
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27	1574	1561	44	1555	50	1553	40	1588	13	77	1524	1511	94	1505	100	1503	90	1538	63	127	1474	1461	144	1455	150	1453	140	1488	113	177	1424	1411	194	1405	200	1403	190	1438	163	32020	
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30	1571	1584	18	1582	20	1577	1579	23	21	80	1521	1534	68	1532	70	1527	1529	73	71	130	1471	1484	118	1482	120	1477	1479	123	121	180	1421	1434	168	1432	170	1427	1429	173	171	32020	
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503	501	1099	1097	1096	506	1094	508	509	1092	753	751	849	847	846	756	844	758	759	842	703	701	899	897	896	706	894	708	709	892	253	251	1349	1347	1346	256	1344	258	259	1342	32020	
1098	1100	502	504	505	1095	507	1093	511	1090	848	850	752	754	755	845	757	843	761	840	898	900	702	704	705	895	707	893	711	890	1348	1350	252	254	255	1345	257	1343	261	1340	32020	
525	1076	538	1062	535	1068	536	1064	1091	510	775	826	788	812	785	818	786	814	841	760	725	876	738	862	735	868	736	864	891	710	275	1326	288	1312	285	1318	286	1314	1341	260	32020	
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527	1074	1061	544	1055	550	1053	540	1088	513	777	824	811	794	805	800	803	790	838	763	727	874	861	744	855	750	853	740	888	713	277	1324	1311	294	1305	300	1303	290	1338	263	32020	
1073	528	1059	1058	545	1052	547	542	514	1087	823	778	809	808	795	802	797	792	764	837	873	728	859	858	745	852	747	742	714	887	1323	278	1309	1308	295	1302	297	292	264	1337	32020	
1072	529	541	1051	548	1057	546	1060	1086	515	822	779	791	801	798	807	796	810	836	765	872	729	741	851	748	857	746	860	886	715	1322	279	291	1301	298	1307	296	1310	1336	265	32020	
1070	531	537	539	1066	533	1065	1063	516	1085	820	781	787	789	816	783	815	813	766	835	870	731	737	739	866	733	865	863	716	885	1320	281	287	289	1316	283	1315	1313	266	1335	32020	
532	1069	517	1083	519	1081	524	522	1078	1080	782	819	767	833	769	831	774	772	828	830	732	869	717	883	719	881	724	722	878	880	282	1319	267	1333	269	1331	274	272	1328	1330	32020	
530	1071	1084	518	1082	520	1077	1079	523	521	780	821	834	768	832	770	827	829	773	771	730	871	884	718	882	720	877	879	723	721	280	1321	1334	268	1332	270	1327	1329	273	271	32020	
453	451	1149	1147	1146	456	1144	458	459	1142	403	401	1199	1197	1196	406	1194	408	409	1192	353	351	1249	1247	1246	356	1244	358	359	1242	303	301	1299	1297	1296	306	1294	308	309	1292	32020	
1148	1150	452	454	455	1145	457	1143	461	1140	1198	1200	402	404	405	1195	407	1193	411	1190	1248	1250	352	354	355	1245	357	1243	361	1240	1298	1300	302	304	305	1295	307	1293	311	1290	32020	
475	1126	488	1112	485	1118	486	1114	1141	460	425	1176	438	1162	435	1168	436	1164	1191	410	375	1226	388	1212	385	1218	386	1214	1241	360	325	1276	338	1262	335	1268	336	1264	1291	310	32020	
1125	476	1117	499	1104	493	1106	484	1139	462	1175	426	1167	449	1154	443	1156	434	1189	412	1225	376	1217																			

6	mgc	13960	13539	13061	14558	13076	13518	13954	13500	12069	13515	13360	13539	13661	15358	13676	13518	13354	13500	11869	13515	13360	13539	13661	14958	13676	13518	13354	13500	12269	13515
891	884	886	898	18	16	14	4	2	892	841	834	836	848	68	66	64	54	52	842	791	784	786	798	118	116	114	104	102	792	13515	
13	21	19	881	879	878	876	26	24	888	63	71	69	831	829	828	826	76	74	838	113	121	119	781	779	778	776	126	124	788	13515	
11	880	882	20	22	23	25	875	877	890	61	830	832	70	72	73	75	825	827	840	111	780	782	120	122	123	125	775	777	790	13515	
7	35	866	49	854	43	856	39	862	894	57	85	816	99	804	93	806	89	812	844	107	135	766	149	754	143	756	139	762	794	13515	
1	38	863	44	855	50	853	42	859	900	51	88	813	94	805	100	803	92	809	850	101	138	763	144	755	150	753	142	759	800	13515	
889	865	36	858	45	852	47	861	40	12	839	815	86	808	95	802	97	811	90	62	789	765	136	758	145	752	147	761	140	112	13515	
893	864	37	851	48	857	46	860	41	8	843	814	87	801	98	807	96	810	91	58	793	764	137	751	148	757	146	760	141	108	13515	
895	871	873	27	29	34	32	868	870	6	845	821	823	77	79	84	82	818	820	56	795	771	773	127	129	134	132	768	770	106	13515	
896	30	28	874	872	867	869	33	31	5	846	80	78	824	822	817	819	83	81	55	796	130	128	774	772	767	769	133	131	105	13515	
9	17	15	3	883	885	887	897	899	10	59	67	65	53	833	835	837	847	849	60	109	117	115	103	783	785	787	797	799	110	13515	
541	534	536	548	368	366	364	354	352	542	491	484	486	498	418	416	414	404	402	492	741	734	736	748	168	166	164	154	152	742	13515	
363	371	369	531	529	528	526	376	374	538	413	421	419	481	479	478	476	426	424	488	163	171	169	731	729	728	726	176	174	738	13515	
361	530	532	370	372	373	375	525	527	540	411	480	482	420	422	423	425	475	477	490	161	730	732	170	172	173	175	725	727	740	13515	
357	385	516	399	504	393	506	389	512	544	407	435	466	449	454	443	456	439	462	494	157	185	716	199	704	193	706	189	712	744	13515	
351	388	513	394	505	400	503	392	509	550	401	438	463	444	455	450	453	442	459	500	151	188	713	194	705	200	703	192	709	750	13515	
539	515	386	508	395	502	397	511	390	362	489	465	436	458	445	452	447	461	440	412	739	715	186	708	195	702	197	711	190	162	13515	
543	514	387	501	398	507	396	510	391	358	493	464	437	451	448	457	446	460	441	408	743	714	187	701	198	707	196	710	191	158	13515	
545	521	523	377	379	384	382	518	520	356	495	471	473	427	429	434	432	468	470	406	745	721	723	177	179	184	182	718	720	156	13515	
546	380	378	524	522	517	519	383	381	355	496	430	428	474	472	467	469	433	431	405	746	180	178	724	722	717	719	183	181	155	13515	
359	367	365	353	533	535	537	547	549	360	409	417	415	403	483	485	487	497	499	410	159	167	165	153	733	735	737	747	749	160	13515	
591	584	586	598	318	316	314	304	302	592	641	634	636	648	268	266	264	254	252	642	691	684	686	698	218	216	214	204	202	692	13515	
313	321	319	581	579	578	576	326	324	588	263	271	269	631	629	628	626	276	274	638	213	221	219	681	679	678	676	226	224	688	13515	
311	580	582	320	322	323	325	575	577	590	261	630	632	270	272	273	275	625	627	640	211	680	682	220	222	223	225	675	677	690	13515	
307	335	566	349	554	343	556	339	562	594	257	285	616	299	604	293	606	289	612	644	207	235	666	249	654	243	656	239	662	694	13515	
301	338	563	344	555	350	553	342	559	600	251	288	613	294	605	300	603	292	609	650	201	238	663	244	655	250	653	242	659	700	13515	
589	565	336	558	345	552	347	561	340	312	639	615	286	608	295	602	297	611	290	262	689	665	236	658	245	652	247	661	240	212	13515	
593	564	337	551	348	557	346	560	341	308	643	614	287	601	298	607	296	610	291	258	693	664	237	651	248	657	246	660	241	208	13515	
595	571	573	327	329	334	332	568	570	306	645	621	623	277	279	284	282	618	620	256	695	671	673	227	229	234	232	668	670	206	13515	
596	330	328	574	572	567	569	333	331	305	646	280	278	624	622	617	619	283	281	255	696	230	228	674	672	667	669	233	231	205	13515	
309	317	315	303	583	585	587	597	599	310	259	267	265	253	633	635	637	647	649	260	209	217	215	203	683	685	687	697	699	210	13515	
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13	mgc	13103	13491	14955	13500	14979	12421	12075	13515	13196	13515	13703	13491	15155	13500	15179	11621	11875	13515	13796	13515	13703	13491	14755	13500	14779	12021	12275	13515	13796	13515	
21	19	881	879	878	876	26	24	899	2	71	69	831	829	828	826	76	74	849	52	121	119	781	779	778	776	126	124	799	102	13515		
880	882	20	22	23	25	875	877	10	891	830	832	70	72	73	75	825	827	60	841	780	782	120	122	123	125	775	777	110	791	13515		
35	866	49	854	43	856	39	862	894	7	85	816	99	804	93	806	89	812	844	57	135	766	149	754	143	756	139	762	794	107	13515		
38	863	44	855	50	853	42	859	5	896	88	813	94	805	100	803	92	809	55	846	138	763	144	755	150	753	142	759	105	796	13515		
865	36	858	45	852	47	861	40	895	6	815	86	808	95	802	97	811	90	845	56	765	136	758	145	752	147	761	140	795	106	13515		
864	37	851	48	857	46	860	41	18	883	814	87	801	98	807	96	810	91	68	833	764	137	751	148	757	146	760	141	118	783	13515		
871	873	27	29	34	32	868	870	888	13	821	823	77	79	84	82	818	820	838	63	771	773	127	129	134	132	768	770	788	113	13515		
30	28	874	872	867	869	33	31	8	893	80	78	824	822	817	819	83	81	58	843	130	128	774	772	767	769	133	131	108	793	13515		
9	890	12	898	15	884	897	885	1	14	59	840	62	848	65	834	847	835	51	64	109	790	112	798	115	784	797	785	101	114	13515		
892	11	889	3	886	17	4	16	887	900	842	61	839	53	836	67	54	66	837	850	792	111	789	103	786	117	104	116	787	800	13515		
371	369	531	529	528	526	376	374	549	352	421	419	481	479	478	476	426	424	499	402	171	169	731	729	728	726	176	174	749	152	13515		
530	532	370	372	373	375	525	527	360	541	480	482	420	422	423	425	475	477	410	491	730	732	170	172	173	175	725	727	160	741	13515		
385	516	399	504	393	506	389	512	544	357	435	466	449	454	443	456	439	462	494	407	185	716	199	704	193	706	189	712	744	157	13515		
388	513	394	505	400	503	392	509	355	546	438	463	444	455	450	453	442	459	405	496	188	713	194	705	200	703	192	709	155	746	13515		
515	386	508	395	502	397	511	390	545	356	465	436	458	445	452	447	461	440	495	406	715	186	708	195	702	197	711	190	745	156	13515		
514	387	501	398	507	396	510	391	368	533	464	437	451	448	457	446	460	441	418	483	714	187	701	198	707	196	710	191	168	733	13515		
521	523	377	379	384	382	518	520	538	363	471	473	427	429	434	432	468	470	488	413	721	723	177	179	184	182	718	720	738	163	13515		
380	378	524	522	517	519	383	381	358	543	430	428	474	472	467	469	433	431	408	493	180	178	724	722	717	719	183	181	158	743	13515		
359	540	362	548	365	534	547	535	351	364	409	490	412	498	415	484	497	485	401	414	159	740	162	748	165	734	747	735	151	164	13515		
542	361	539	353	536	367	354	366	537	550	492	411	489	403	486	417	404	416	487	500	742	161	739	153	736	167	154	166	737	750	13515		
321	319	581	579	578	576	326	324	599	302	271	269	631	629	628	626	276	274	649	252	221	219	681	679	678	676	226	224	699	202	13515		
580	582	320	322	323	325	575	577	310	591	630	632	270	272	273	275	625	627	260	641	680	682	220	222	223	225	675	677	210	691	13515		
335	566	349	554	343	556	339	562	594	307	285	616	299	604	293	606	289	612	644	257	235	666	249	654	243	656	239	662	694	207	13515		
338	563	344	555	350	553	342	559	305	596	288	613	294	605	300	603	292	609	255	646	238	663	244	655	250	653	242	659	205	696	13515		
565	336	558	345	552	347	561	340	595	306	615	286	608	295	602	297	611	290	645	256	665	236	658	245	652	247	661	240	695	206	13515		
564	337	551	348	557	346	560	341	318	583	614	287	601	298	607	296	610	291	268	633	664	237	651	248	657	246	660	241	218	683	13515		
571	573	327	329	334	332	568	570	588	313	621	623	277	279	284	282	618	620	638	263	671	673	227	229	234	232	668	670	688	213	13515		
330	328	574	572	567	569	333	331	308	593	280	278	624	622	617	619	283	281	258	643	230	228	674	672	667	669	233	231	208	693	13515		
309	590	312	598	315	584	597	585	301	314	259	640	262	648	265	634	647	635	251	264	209	690	212	698	215	684	697	685	201	214	13515		
592	311	589	303	586	317	304	316	587	600	642	261	639	253	636	267	254	266	637	650	692	211	689	203	686	217	204	216	687	700	13515		
13515	13515	13515	13515	13515	13515	13515	13515	13515	13515	13515	13515	13515	13515	13515	13515	13515	13515	13515	13515	13515	13515	13515	13515	13515	13515	13515	13515	13515	13515	13515	13515	13515

2.6 Magic Squares of Order 20

Below are two examples of magic squares of order 20 obtained from magic squares of order 40. It is obtained by the application of the formula $\frac{a^2 - b^2}{2}$, $a > b$, i.e., subtract $\frac{40^2 - 20^2}{2} := 600$ from each entry of magic square order 40, we get the following magic squares of order 20:

4	mgc	4128	4106	4118	4496	3442	4034	5286	3894	2286	4010	4528	4106	3918	4296	3842	3634	5286	3894	2886	4010
3	1	399	397	396	6	394	8	9	392	53	51	349	347	346	56	344	58	59	342	4010	
398	400	2	4	5	395	7	393	11	390	348	350	52	54	55	345	57	343	61	340	4010	
25	376	33	367	366	365	34	38	391	10	75	326	83	317	316	315	84	88	341	60	4010	
375	26	362	40	360	41	43	357	389	12	325	76	312	90	310	91	93	307	339	62	4010	
27	374	356	355	47	48	352	45	388	13	77	324	306	305	97	98	302	95	338	63	4010	
373	28	50	46	353	354	49	351	14	387	323	78	100	96	303	304	99	301	64	337	4010	
372	29	39	358	42	359	361	44	386	15	322	79	89	308	92	309	311	94	336	65	4010	
370	31	363	37	35	36	364	368	16	385	320	81	313	87	85	86	314	318	66	335	4010	
32	369	17	383	19	381	24	22	378	380	82	319	67	333	69	331	74	72	328	330	4010	
30	371	384	18	382	20	377	379	23	21	80	321	334	68	332	70	327	329	73	71	4010	
153	151	249	247	246	156	244	158	159	242	103	101	299	297	296	106	294	108	109	292	4010	
248	250	152	154	155	245	157	243	161	240	298	300	102	104	105	295	107	293	111	290	4010	
175	226	183	217	216	215	184	188	241	160	125	276	133	267	266	265	134	138	291	110	4010	
225	176	212	190	210	191	193	207	239	162	275	126	262	140	260	141	143	257	289	112	4010	
177	224	206	205	197	198	202	195	238	163	127	274	256	255	147	148	252	145	288	113	4010	
223	178	200	196	203	204	199	201	164	237	273	128	150	146	253	254	149	251	114	287	4010	
222	179	189	208	192	209	211	194	236	165	272	129	139	258	142	259	261	144	286	115	4010	
220	181	213	187	185	186	214	218	166	235	270	131	263	137	135	136	264	268	116	285	4010	
182	219	167	233	169	231	174	172	228	230	132	269	117	283	119	281	124	122	278	280	4010	
180	221	234	168	232	170	227	229	173	171	130	271	284	118	282	120	277	279	123	121	4010	
4010	4010	4010	4010	4010	4010	4010	4010	4010	4010	4010	4010	4010	4010	4010	4010	4010	4010	4010	4010	4010	4010

7	mgc	3672	4972	3706	4018	4404	3190	4024	4010	3994	4010	3672	5572	3306	4018	4404	3190	3824	4010	4194	4010
49	354	43	356	361	40	31	370	18	383	99	304	93	306	311	90	81	320	68	333	4010	
44	355	50	353	41	360	19	382	5	396	94	305	100	303	91	310	69	332	55	346	4010	
358	45	352	47	359	42	372	29	394	7	308	95	302	97	309	92	322	79	344	57	4010	
351	48	357	46	367	34	27	374	399	2	301	98	307	96	317	84	77	324	349	52	4010	
36	35	362	368	38	364	25	376	395	6	86	85	312	318	88	314	75	326	345	56	4010	
365	366	39	33	37	363	371	30	10	391	315	316	89	83	87	313	321	80	60	341	4010	
28	26	380	369	24	379	378	20	388	13	78	76	330	319	74	329	328	70	338	63	4010	
373	375	21	32	377	22	381	23	8	393	323	325	71	82	327	72	331	73	58	343	4010	
15	384	12	390	9	398	397	385	1	14	65	334	62	340	59	348	347	335	51	64	4010	
386	17	389	11	392	3	4	16	387	400	336	67	339	61	342	53	54	66	337	350	4010	
199	204	193	206	211	190	181	220	168	233	149	254	143	256	261	140	131	270	118	283	4010	
194	205	200	203	191	210	169	232	155	246	144	255	150	253	141	260	119	282	105	296	4010	
208	195	202	197	209	192	222	179	244	157	258	145	252	147	259	142	272	129	294	107	4010	
201	198	207	196	217	184	177	224	249	152	251	148	257	146	267	134	127	274	299	102	4010	
186	185	212	218	188	214	175	226	245	156	136	135	262	268	138	264	125	276	295	106	4010	
215	216	189	183	187	213	221	180	160	241	265	266	139	133	137	263	271	130	110	291	4010	
178	176	230	219	174	229	228	170	238	163	128	126	280	269	124	279	278	120	288	113	4010	
223	225	171	182	227	172	231	173	158	243	273	275	121	132	277	122	281	123	108	293	4010	
165	234	162	240	159	248	247	235	151	164	115	284	112	290	109	298	297	285	101	114	4010	
236	167	239	161	242	153	154	166	237	250	286	117	289	111	292	103	104	116	287	300	4010	
4010	4010	4010	4010	4010	4010	4010	4010	4010	4010	4010	4010	4010	4010	4010	4010	4010	4010	4010	4010	4010	4010

Above we have given only two examples in each case. More examples with complete can be seen in attached **excel files**.

3 Author’s Contribution to Magic Squares and Recreation Numbers

For author’s contribution to **magic squares** and **recreation numbers** please see the links below:

- **Inder J. Taneja**, Magic Squares, <https://inderjtaneja.com/2019/06/27/publications-magic-squares/>
- **Inder J. Taneja**, Recreation of Numbers, <https://inderjtaneja.com/2019/06/27/publications-recreation-of-numbers/>

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