Smallest possible trimagic square found 2002-06-08 by Walter Trump

(*translated original file*)

The magic square with numbers from 1 to 144

												870
1	22	33	41	62	66	79	83	104	112	123	144	**870**
9	119	45	115	107	93	52	38	30	100	26	136	**870**
75	141	35	48	57	14	131	88	97	110	4	70	**870**
74	8	106	49	12	43	102	133	96	39	137	71	**870**
140	101	124	42	60	37	108	85	103	21	44	5	**870**
122	76	142	86	67	126	19	78	59	3	69	23	**870**
55	27	95	135	130	89	56	15	10	50	118	90	**870**
132	117	68	91	11	99	46	134	54	77	28	13	**870**
73	64	2	121	109	32	113	36	24	143	81	72	**870**
58	98	84	116	138	16	129	7	29	61	47	87	**870**
80	34	105	6	92	127	18	53	139	40	111	65	**870**
51	63	31	20	25	128	17	120	125	114	82	94	**870**
870	**870**	**870**	**870**	**870**	**870**	**870**	**870**	**870**	**870**	**870**	**870**	**870**

The sum of the entries in all rows, columns and diagonals is 870.

The square is still magic if all entries are squared (bimagic).
(For example the number 9 in the first column is replace by 9·9 = 81.)

												83810
1	484	1089	1681	3844	4356	6241	6889	10816	12544	15129	20736	**83810**
81	14161	2025	13225	11449	8649	2704	1444	900	10000	676	18496	**83810**
5625	19881	1225	2304	3249	196	17161	7744	9409	12100	16	4900	**83810**
5476	64	11236	2401	144	1849	10404	17689	9216	1521	18769	5041	**83810**
19600	10201	15376	1764	3600	1369	11664	7225	10609	441	1936	25	**83810**
14884	5776	20164	7396	4489	15876	361	6084	3481	9	4761	529	**83810**
3025	729	9025	18225	16900	7921	3136	225	100	2500	13924	8100	**83810**
17424	13689	4624	8281	121	9801	2116	17956	2916	5929	784	169	**83810**
5329	4096	4	14641	11881	1024	12769	1296	576	20449	6561	5184	**83810**
3364	9604	7056	13456	19044	256	16641	49	841	3721	2209	7569	**83810**
6400	1156	11025	36	8464	16129	324	2809	19321	1600	12321	4225	**83810**
2601	3969	961	400	625	16384	289	14400	15625	12996	6724	8836	**83810**
83810	**83810**	**83810**	**83810**	**83810**	**83810**	**83810**	**83810**	**83810**	**83810**	**83810**	**83810**	**83810**

You will get another magic square if you replace all entries by their 3rd powers (trimagic).
(For example: the number 4 in row 3 is replaced by 4·4·4 = 64.)

												9082800
1	10648	35937	68921	238328	287496	493039	571787	1124864	1404928	1860867	2985984	**9082800**
729	1685159	91125	1520875	1225043	804357	140608	54872	27000	1000000	17576	2515456	**9082800**
421875	2803221	42875	110592	185193	2744	2248091	681472	912673	1331000	64	343000	**9082800**
405224	512	1191016	117649	1728	79507	1061208	2352637	884736	59319	2571353	357911	**9082800**
2744000	1030301	1906624	74088	216000	50653	1259712	614125	1092727	9261	85184	125	**9082800**
1815848	438976	2863288	636056	300763	2000376	6859	474552	205379	27	328509	12167	**9082800**
166375	19683	857375	2460375	2197000	704969	175616	3375	1000	125000	1643032	729000	**9082800**
2299968	1601613	314432	753571	1331	970299	97336	2406104	157464	456533	21952	2197	**9082800**
389017	262144	8	1771561	1295029	32768	1442897	46656	13824	2924207	531441	373248	**9082800**
195112	941192	592704	1560896	2628072	4096	2146689	343	24389	226981	103823	658503	**9082800**
512000	39304	1157625	216	778688	2048383	5832	148877	2685619	64000	1367631	274625	**9082800**
132651	250047	29791	8000	15625	2097152	4913	1728000	1953125	1481544	551368	830584	**9082800**
9082800	**9082800**	**9082800**	**9082800**	**9082800**	**9082800**	**9082800**	**9082800**	**9082800**	**9082800**	**9082800**	**9082800**	**9082800**