



Table of Low-Weight Binary Irreducible Polynomials

Gadiel Seroussi
Computer Systems Laboratory
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A table of low-weight irreducible polynomials over the finite field F_2 is presented. For each integer n in the range $2 \leq n \leq 10,000$, a binary irreducible polynomial $f(x)$ of degree n and minimum possible weight is listed. Among those of minimum weight, the polynomial listed is such that the degree of $f(x) - x^n$ is lowest (similarly, subsequent lower degrees are minimized in case of ties). All the polynomials listed are either trinomials or pentanomials. The general question of whether an irreducible polynomial of weight at most 5 (or any other fixed odd weight $w = 5$) exists for every value of n is an open one. Low-weight irreducibles are useful when implementing the arithmetic of the finite field F_{2^n} , as the number of operations in the reduction of the product of two polynomials of degree $n - 1$ modulo an irreducible of degree n and weight w is proportional to $(w - 1)n$.

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1 Background

Large finite fields are useful in the implementation of cryptographic protocols, and in particular in elliptic curve cryptography. Typical choices of fields include F_p , realized as the integers modulo a prime p , and F_{2^n} , often realized as the set of polynomials of degree at most $n-1$ in $F_2[x]$, modulo an irreducible polynomial $f(x) \in F_2[x]$ of degree n . It is the latter case that motivates this note.

From an algebraic point of view, for the purpose of implementing F_{2^n} , all choices of irreducible f for a given n are equivalent. However, choosing f of low *weight* (number of nonzero coefficients) can lead to more efficient implementation of the arithmetic of F_{2^n} , as the complexity of reducing a polynomial of degree $2n-2$ modulo f is proportional to $(w-1)n$, where w denotes the weight of f . For $n > 1$, the lowest possible weight is $w = 3$, i.e., f being a trinomial. The existence, distribution and other properties of irreducible trinomials over F_2 have been extensively studied in the literature. In particular, it follows from a theorem of Swan [5] that irreducible trinomials do not exist for $n \equiv 0 \pmod{8}$, and that they are rather scarce when $n \equiv 3$ or $5 \pmod{8}$; see also [1],[3], and references therein. The tables in [2] show that up to $n = 5,000$, irreducible trinomials exist for slightly over one half of the values of n .

When an irreducible trinomial of degree n does not exist, the next best choice is a pentanomial, e.g., $w = 5$. In the appendix, we present a table of low-weight binary irreducible polynomials of degree n in the range $2 \leq n \leq 10,000$. For each degree n in that range, an irreducible trinomial is listed if one exists; otherwise an irreducible pentanomial was always found and is listed. The table contains 5,148 trinomials and 4,851 pentanomials.

In fact, there is no known value of n for which an irreducible polynomial of weight $w \leq 5$ does not exist. The general question, however, is open for any fixed odd weight $w > 3$. The following heuristic argument would seem to reinforce the expectation that values of n for which irreducible pentanomials do not exist, if any, must be rare. The probability of a random polynomial of degree n being irreducible is roughly $1/n$ [3]. The number of pentanomials of degree n with constant coefficient equal to one is of the order of n^3 . Therefore, if the density of irreducibles among pentanomials is anywhere near their density among arbitrary polynomials of degree n , then the likelihood of finding an irreducible pentanomial of degree n should be very high. (A similar argument for trinomials pits a probability of $1/n$ against a number of trinomials of the order of n .)

The table in the appendix is organized as follows: A trinomial $x^n + x^j + 1$, $n > j > 0$, is represented by the pair n, j . A pentanomial $x^n + x^{j_1} + x^{j_2} + x^{j_3} + 1$, with $n > j_1 > j_2 > j_3 > 0$, is represented by the quadruple n, j_1, j_2, j_3 . Polynomials are listed in increasing order of n , going in each page from left to right first and top to bottom next. When a trinomial is listed, it has the lowest value j among all irreducible trinomials of the same degree. For pentanomials, the first irreducible in alphabetical order of (j_1, j_2, j_3) is listed (i.e., lowest j_1 , then lowest j_2 , then lowest j_3).

It should be noted that for all pentanomials listed, the value of j_1 is quite low, which has some other implementation advantages. The maximum value of j_1 for pentanomials in the table is $j_1 = 56$ for $n = 9760$. In fact, the value of j_1 for most pentanomials in the table is quite close to (and below) the real solution t to the equation $n = t(t-1)(t-2)/6$, consistent with the heuristic argument above. For $n = 10,000$, we have $t \approx 40$.

The polynomials in the table were generated with a C++ program based on V. Shoup's NTL library [4], using a deterministic irreducibility test. The first 2048 entries were independently verified with the Maple symbolic package. The table is available in machine-readable form from the author.

The choice of $n = 10,000$ as the stopping point for the table is quite arbitrary, and only intended to amply cover all presently envisioned cryptographic applications where F_{2^n} is used. It follows from the table that in implementing F_{2^n} for those applications, one can safely assume that an irreducible of weight $w \leq 5$ is available. Since binary irreducibility testing can be implemented quite efficiently, it should not be particularly difficult to extend the table to larger values of n .

References

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Appendix: Table of Low-Weight Binary Irreducible Polynomials for $2 \leq n \leq 10,000$.

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

801,217	802,15,13,9	803,14,9,2	804,75	805,8,7,2	806,21	807,7	808,14,3,2	809,15	810,159
811,12,10,8	812,29	813,10,3,1	814,21	815,333	816,11,8,2	817,52	818,119	819,16,9,7	820,123
821,15,11,2	822,17	823,9	824,11,6,4	825,38	826,255	827,12,10,7	828,189	829,4,3,1	830,17,10,7
831,49	832,13,5,2	833,149	834,15	835,14,7,5	836,10,9,2	837,8,6,5	838,61	839,54	840,11,5,1
841,144	842,47	843,11,10,7	844,105	845,2	846,105	847,136	848,11,4,1	849,253	850,111
851,13,10,5	852,159	853,10,7,1	854,7,5,3	855,29	856,19,10,3	857,119	858,207	859,17,15,4	860,35
861,14	862,349	863,6,3,2	864,21,10,6	865,1	866,75	867,9,5,2	868,145	869,11,7,6	870,301
871,378	872,13,3,1	873,352	874,12,7,4	875,12,8,1	876,149	877,6,5,4	878,12,9,8	879,11	880,15,7,5
881,78	882,99	883,17,16,12	884,173	885,8,7,1	886,13,9,8	887,147	888,19,18,10	889,127	890,183
891,12,4,1	892,31	893,11,8,6	894,173	895,12	896,7,5,3	897,113	898,207	899,18,15,5	900,1
901,13,7,6	902,21	903,35	904,12,7,2	905,117	906,123	907,12,10,2	908,143	909,14,4,1	910,15,9,7
911,204	912,7,5,1	913,91	914,4,2,1	915,8,6,3	916,183	917,12,10,7	918,77	919,36	920,14,9,6
921,221	922,7,6,5	923,16,14,13	924,31	925,16,15,7	926,365	927,403	928,10,3,2	929,11,4,3	930,31
931,10,9,4	932,177	933,16,6,1	934,22,6,5	935,417	936,15,13,12	937,217	938,207	939,7,5,4	940,10,7,1
941,11,6,1	942,45	943,24	944,12,11,9	945,77	946,21,20,13	947,9,6,5	948,189	949,8,3,2	950,13,12,10
951,260	952,16,9,7	953,168	954,131	955,7,6,3	956,305	957,10,9,6	958,13,9,4	959,143	960,12,9,3
961,18	962,15,8,5	963,20,9,6	964,103	965,15,4,2	966,201	967,36	968,9,5,2	969,31	970,11,7,2
971,6,2,1	972,7	973,13,6,4	974,9,8,7	975,19	976,17,10,6	977,15	978,9,3,1	979,178	980,8,7,6
981,12,6,5	982,177	983,230	984,24,9,3	985,222	986,3	987,16,13,12	988,121	989,10,4,2	990,161
991,39	992,17,15,13	993,62	994,223	995,15,12,2	996,65	997,12,6,3	998,101	999,59	1000,5,4,3
1001,17	1002,5,3,2	1003,13,8,3	1004,10,9,7	1005,12,8,2	1006,5,4,3	1007,75	1008,19,17,8	1009,55	1010,99
1011,10,7,4	1012,115	1013,9,8,6	1014,385	1015,186	1016,15,6,3	1017,9,4,1	1018,12,10,5	1019,10,8,1	1020,135
1021,5,2,1	1022,317	1023,7	1024,19,6,1	1025,294	1026,35	1027,13,12,6	1028,119	1029,98	1030,93
1031,68	1032,21,15,3	1033,108	1034,75	1035,12,6,5	1036,411	1037,12,7,2	1038,13,7,2	1039,21	1040,15,10,8
1041,412	1042,439	1043,10,7,6	1044,41	1045,13,9,6	1046,8,5,2	1047,10	1048,15,7,2	1049,141	1050,159
1051,13,12,10	1052,291	1053,10,9,1	1054,105	1055,24	1056,11,2,1	1057,198	1058,27	1059,6,3,1	1060,439
1061,10,3,1	1062,49	1063,168	1064,13,11,9	1065,463	1066,10,9,3	1067,13,9,8	1068,15,8,3	1069,18,16,8	1070,15,14,11
1071,7	1072,19,9,8	1073,12,6,3	1074,7,4,3	1075,15,14,5	1076,8,6,3	1077,10,9,7	1078,361	1079,230	1080,15,9,6
1081,24	1082,407	1083,16,7,2	1084,189	1085,62	1086,189	1087,112	1088,22,21,10	1089,91	1090,79
1091,12,10,5	1092,23	1093,7,6,1	1094,57	1095,139	1096,24,15,6	1097,14	1098,83	1099,16,9,1	1100,35
1101,9,7,4	1102,117	1103,65	1104,21,9,6	1105,21	1106,195	1107,23,11,10	1108,327	1109,17,14,3	1110,417
1111,13	1112,15,8,6	1113,107	1114,19,10,6	1115,18,15,3	1116,59	1117,12,10,4	1118,9,7,5	1119,283	1120,13,9,6
1121,62	1122,427	1123,14,7,3	1124,8,7,4	1125,15,8,3	1126,105	1127,27	1128,7,3,1	1129,103	1130,551
1131,10,6,1	1132,6,4,1	1133,11,6,4	1134,129	1135,9	1136,9,4,2	1137,277	1138,31	1139,13,12,5	1140,141
1141,12,7,3	1142,357	1143,7,2,1	1144,11,9,7	1145,227	1146,131	1147,7,6,3	1148,23	1149,20,17,3	1150,13,4,1
1151,90	1152,15,3,2	1153,241	1154,75	1155,13,6,1	1156,307	1157,8,7,3	1158,245	1159,66	1160,15,11,2
1161,365	1162,18,16,11	1163,11,10,1	1164,19	1165,8,6,1	1166,189	1167,133	1168,12,7,2	1169,114	1170,27
1171,6,5,1	1172,15,5,2	1173,17,14,5	1174,133	1175,476	1176,11,9,3	1177,16	1178,375	1179,15,8,6	1180,25
1181,17,11,6	1182,77	1183,87	1184,5,3,2	1185,134	1186,171	1187,13,8,4	1188,75	1189,8,3,1	1190,233
1191,196	1192,9,8,7	1193,173	1194,15,14,12	1195,13,6,5	1196,281	1197,9,8,2	1198,405	1199,114	1200,15,9,6
1201,171	1202,287	1203,8,4,2	1204,43	1205,4,2,1	1206,513	1207,273	1208,11,10,6	1209,118	1210,243
1211,14,7,1	1212,203	1213,9,5,2	1214,257	1215,302	1216,27,25,9	1217,393	1218,91	1219,12,10,6	1220,413
1221,15,14,9	1222,18,16,1	1223,255	1224,12,9,7	1225,234	1226,167	1227,16,13,10	1228,27	1229,15,6,2	1230,433
1231,105	1232,25,10,2	1233,151	1234,427	1235,13,9,8	1236,49	1237,10,6,4	1238,153	1239,4	1240,17,7,5
1241,54	1242,203	1243,16,15,1	1244,16,14,7	1245,13,6,1	1246,25	1247,14	1248,15,5,3	1249,187	1250,15,13,10
1251,13,10,5	1252,97	1253,11,10,9	1254,19,10,4	1255,589	1256,31,30,2	1257,289	1258,9,6,4	1259,11,8,6	1260,21
1261,7,4,1	1262,7,4,2	1263,77	1264,5,3,2	1265,119	1266,7	1267,9,5,2	1268,345	1269,17,10,8	1270,333
1271,17	1272,16,9,7	1273,168	1274,15,13,4	1275,11,10,1	1276,217	1277,18,11,10	1278,189	1279,216	1280,12,7,5
1281,229	1282,231	1283,12,9,3	1284,223	1285,10,9,1	1286,153	1287,470	1288,23,16,6	1289,99	1290,10,4,3
1291,9,8,4	1292,12,10,1	1293,14,9,6	1294,201	1295,38	1296,15,14,2	1297,198	1298,399	1299,14,11,5	1300,75
1301,11,10,1	1302,77	1303,16,12,8	1304,20,17,15	1305,326	1306,39	1307,14,12,9	1308,495	1309,8,3,2	1310,333
1311,476	1312,15,14,2	1313,164	1314,19	1315,12,4,2	1316,8,6,3	1317,13,12,3	1318,12,11,5	1319,129	1320,12,9,3
1321,52	1322,10,8,3	1323,17,16,2	1324,337	1325,12,9,3	1326,397	1327,277	1328,21,11,3	1329,73	1330,11,6,1
1331,7,5,4	1332,95	1333,11,3,2	1334,617	1335,392	1336,8,3,2	1337,75	1338,315	1339,15,6,4	1340,125
1341,6,5,2	1342,15,9,7	1343,348	1344,15,6,1	1345,553	1346,6,3,2	1347,10,9,7	1348,553	1349,14,10,4	1350,237
1351,39	1352,17,14,6	1353,371	1354,255	1355,8,4,1	1356,131	1357,14,6,1	1358,117	1359,98	1360,5,3,2
1361,56	1362,655	1363,9,5,2	1364,239	1365,11,8,4	1366,1	1367,134	1368,15,9,5	1369,88	1370,10,5,3
1371,10,9,4	1372,181	1373,15,11,2	1374,609	1375,52	1376,19,18,10	1377,100	1378,7,6,3	1379,15,8,2	1380,183
1381,18,7,6	1382,10,9,2	1383,130	1384,11,5,1	1385,12	1386,219	1387,13,10,7	1388,11	1389,19,9,4	1390,129
1391,3	1392,17,15,5	1393,300	1394,17,13,9	1395,14,6,5	1396,97	1397,13,8,3	1398,601	1399,55	1400,8,3,1
1401,92	1402,127	1403,12,11,2	1404,81	1405,15,10,8	1406,13,2,1	1407,47	1408,14,13,6	1409,194	1410,383
1411,25,14,11	1412,125	1413,20,19,16	1414,429	1415,282	1416,10,9,6	1417,342	1418,5,3,2	1419,15,9,4	1420,33
1421,9,4,2	1422,49	1423,15	1424,11,6,2	1425,28	1426,103	1427,18,17,8	1428,27	1429,11,6,5	1430,33
1431,17	1432,11,10,6	1433,387	1434,363	1435,15,10,9	1436,83	1437,7,6,4	1438,357	1439,13,12,4	1440,14,13,7
1441,322	1442,395	1443,16,5,1	1444,595	1445,13,10,3	1446,421	1447,195	1448,11,3,2	1449,13	1450,16,12,3
1451,14,3,1	1452,315	1453,26,10,5	1454,297	1455,52	1456,9,4,2	1457,314	1458,243	1459,16,14,9	1460,185
1461,12,5,3	1462,13,5,2	1463,575	1464,12,9,3	1465,39	1466,311	1467,13,5,2	1468,181	1469,20,18,14	1470,49
1471,25	1472,11,4,1	1473,77	1474,17,11,10	1475,15,14,8	1476,21	1477,17,10,5	1478,69	1479,49	1480,11,10,2
1481,32	1482,411	1483,21,16,3	1484,11,7,4	1485,22,10,3	1486,85	1487,140	1488,9,8,6	1489,252	1490,279
1491,9,5,2	1492,307	1493,17,10,4	1494,13,12,9	1495,94	1496,13,11,4	1497,49	1498,17,11,10	1499,16,12,5	1500,25
1501,6,5,2	1502,12,5,1	1503,80	1504,8,3,2	1505,246	1506,11,5,2	1507,11,10,2	1508,599	1509,18,12,10	1510,189
1511,278	1512,10,9,3	1513,399	1514,299	1515,13,10,6	1516,277	1517,13,10,6	1518,69	1519,220	1520,13,10,3
1521,229	1522,18,11,10	1523,16,15,1	1524,27	1525,18,9,3	1526,473	1527,373	1528,18,17,7	1529,60	1530,207
1531,13,9,8	1532,22,20,13	1533,25,18,7	1534,225	1535,404	1536,21,6,2	1537,46	1538,6,2,1	1539,17,12,6	1540,75
1541,4,2,1	1542,365	1543,445	1544,11,7,1	1545,44	1546,10,8,5	1547,12,5,2	1548,63	1549,17,4,2	1550,189
1551,557	1552,19,12,2	1553,252	1554,99	1555,10,8,5	1556,65	1557,14,9,3	1558,9	1559,119	1560,8,5,2
1561,339	1562,95	1563,12,9,7	1564,7	1565,13,10,2	1566,7				

1601,548	1602,783	1603,14,11,1	1604,317	1605,7,6,4	1606,153	1607,87	1608,15,13,1	1609,231	1610,11,5,3
1611,18,13,7	1612,771	1613,30,20,11	1614,15,6,3	1615,103	1616,13,4,3	1617,182	1618,211	1619,17,6,1	1620,27
1621,13,12,10	1622,15,14,10	1623,17	1624,13,11,5	1625,69	1626,11,5,1	1627,18,6,1	1628,603	1629,10,4,2	1630,741
1631,668	1632,17,15,3	1633,147	1634,227	1635,15,10,9	1636,37	1637,16,6,1	1638,173	1639,427	1640,7,5,1
1641,287	1642,231	1643,20,15,10	1644,18,9,1	1645,14,12,5	1646,16,5,1	1647,310	1648,18,13,1	1649,434	1650,579
1651,18,13,8	1652,45	1653,12,8,3	1654,16,9,5	1655,53	1656,19,15,10	1657,16	1658,17,6,5	1659,17,10,1	1660,37
1661,17,10,9	1662,21,13,7	1663,99	1664,17,9,6	1665,176	1666,271	1667,18,17,13	1668,459	1669,21,17,10	1670,6,5,2
1671,202	1672,5,4,3	1673,90	1674,755	1675,15,7,2	1676,363	1677,8,4,2	1678,129	1679,20	1680,11,6,2
1681,135	1682,15,8,7	1683,14,13,2	1684,10,4,3	1685,24,13,10	1686,19,14,11	1687,31	1688,15,8,6	1689,758	1690,16,11,5
1691,16,5,1	1692,359	1693,23,18,17	1694,501	1695,29	1696,15,6,3	1697,201	1698,459	1699,12,10,7	1700,225
1701,22,17,13	1702,24,22,5	1703,161	1704,14,11,3	1705,52	1706,19,17,6	1707,21,14,12	1708,93	1709,13,10,3	1710,201
1711,178	1712,15,12,5	1713,250	1714,7,6,4	1715,17,13,6	1716,221	1717,13,11,8	1718,17,14,9	1719,113	1720,17,14,10
1721,300	1722,39	1723,18,13,3	1724,261	1725,15,14,8	1726,753	1727,8,4,3	1728,11,10,5	1729,94	1730,15,13,1
1731,10,4,2	1732,14,11,10	1733,8,6,2	1734,461	1735,418	1736,19,14,6	1737,403	1738,267	1739,10,9,2	1740,259
1741,20,4,3	1742,869	1743,173	1744,19,18,2	1745,369	1746,255	1747,22,12,9	1748,567	1749,20,11,7	1750,457
1751,482	1752,6,3,2	1753,775	1754,19,17,6	1755,6,4,3	1756,99	1757,15,14,8	1758,6,5,2	1759,165	1760,8,3,2
1761,13,12,10	1762,25,21,17	1763,17,14,9	1764,105	1765,17,15,14	1766,10,3,2	1767,250	1768,25,6,5	1769,327	1770,279
1771,13,6,5	1772,371	1773,15,9,4	1774,117	1775,486	1776,10,9,3	1777,217	1778,635	1779,30,27,17	1780,457
1781,16,6,2	1782,57	1783,439	1784,23,21,6	1785,214	1786,20,13,6	1787,20,16,1	1788,819	1789,15,11,8	1790,593
1791,190	1792,17,14,3	1793,114	1794,21,18,3	1795,10,5,2	1796,12,9,5	1797,8,6,3	1798,69	1799,312	1800,22,5,2
1801,502	1802,843	1803,15,10,3	1804,747	1805,6,5,2	1806,101	1807,123	1808,19,16,9	1809,521	1810,171
1811,16,7,2	1812,12,6,5	1813,22,21,20	1814,545	1815,163	1816,23,18,1	1817,479	1818,495	1819,13,6,5	1820,11
1821,17,5,2	1822,18,8,1	1823,684	1824,7,5,1	1825,9	1826,18,11,3	1827,22,20,13	1828,273	1829,4,3,2	1830,381
1831,51	1832,18,13,7	1833,518	1834,9,5,1	1835,14,12,3	1836,243	1837,21,17,2	1838,53	1839,836	1840,21,10,2
1841,66	1842,12,10,7	1843,13,9,8	1844,339	1845,16,11,5	1846,901	1847,180	1848,16,13,3	1849,49	1850,6,3,2
1851,15,4,1	1852,16,13,6	1853,18,15,12	1854,885	1855,39	1856,11,9,4	1857,688	1858,16,15,7	1859,13,10,6	1860,13
1861,25,23,12	1862,149	1863,260	1864,11,9,1	1865,53	1866,11	1867,12,4,2	1868,9,7,5	1869,11,8,1	1870,121
1871,261	1872,10,5,2	1873,199	1874,20,4,3	1875,17,9,2	1876,13,9,4	1877,12,8,7	1878,253	1879,174	1880,15,4,2
1881,370	1882,9,6,1	1883,16,10,9	1884,669	1885,20,10,9	1886,833	1887,353	1888,17,13,2	1889,29	1890,371
1891,9,8,5	1892,8,7,1	1893,19,8,7	1894,12,11,10	1895,873	1896,26,11,2	1897,12,9,1	1898,10,7,2	1899,13,6,1	1900,235
1901,26,24,19	1902,733	1903,778	1904,12,11,1	1905,344	1906,931	1907,16,6,4	1908,945	1909,21,19,14	1910,18,13,11
1911,67	1912,20,15,10	1913,462	1914,14,5,1	1915,10,9,6	1916,18,11,10	1917,16,9,7	1918,477	1919,105	1920,11,3,2
1921,468	1922,23,16,15	1923,16,15,6	1924,327	1925,23,10,4	1926,357	1927,25	1928,17,16,7	1929,31	1930,7,5,2
1931,16,7,6	1932,277	1933,14,13,6	1934,413	1935,103	1936,15,10,1	1937,231	1938,747	1939,5,2,1	1940,113
1941,20,10,7	1942,15,9,6	1943,11	1944,27,22,18	1945,91	1946,51	1947,18,13,12	1948,603	1949,10,7,3	1950,9
1951,121	1952,15,14,6	1953,17	1954,16,11,2	1955,23,15,6	1956,279	1957,16,12,6	1958,89	1959,371	1960,17,15,2
1961,771	1962,99	1963,7,6,3	1964,21	1965,10,7,5	1966,801	1967,26	1968,25,19,14	1969,175	1970,10,7,2
1971,20,5,4	1972,12,11,1	1973,22,5,1	1974,165	1975,841	1976,25,19,17	1977,238	1978,11,8,6	1979,22,21,4	1980,33
1981,8,7,6	1982,14,9,2	1983,113	1984,13,11,5	1985,311	1986,891	1987,20,16,14	1988,555	1989,23,14,8	1990,133
1991,546	1992,6,3,2	1993,103	1994,15	1995,10,7,3	1996,307	1997,14,10,1	1998,15,12,2	1999,367	2000,13,10,6
2001,169	2002,22,21,11	2003,12,10,8	2004,441	2005,17,12,7	2006,917	2007,205	2008,26,23,13	2009,54	2010,459
2011,17,15,4	2012,19,15,4	2013,5,4,2	2014,9,7,6	2015,42	2016,21,15,7	2017,330	2018,20,7,3	2019,20,7,2	2020,81
2021,19,14,1	2022,349	2023,165	2024,40,35,9	2025,274	2026,475	2027,11,10,3	2028,93	2029,12,7,4	2030,13,12,2
2031,386	2032,7,6,2	2033,881	2034,143	2035,9,8,4	2036,71	2037,19,18,3	2038,16,11,6	2039,155	2040,7,2,1
2041,735	2042,16,8,7	2043,9,7,4	2044,45	2045,7,6,4	2046,12,11,3	2047,3	2048,19,14,13	2049,124	2050,15,13,8
2051,13,6,5	2052,323	2053,21,13,6	2054,201	2055,11	2056,13,12,3	2057,245	2058,343	2059,14,12,10	2060,387
2061,19,4,1	2062,16,3,2	2063,48	2064,17,9,2	2065,97	2066,71	2067,17,13,8	2068,18,10,7	2069,18,9,8	2070,237
2071,11,5,3	2072,13,10,3	2073,253	2074,231	2075,9,7,4	2076,851	2077,15,14,4	2078,16,6,5	2079,35	2080,4,3,1
2081,467	2082,523	2083,21,11,10	2084,4,2,1	2085,9,8,3	2086,261	2087,141	2088,18,11,5	2089,150	2090,9,4,1
2091,12,9,5	2092,17,15,7	2093,16,15,7	2094,645	2095,256	2096,19,4,2	2097,119	2098,19	2099,15,12,9	2100,35
2101,25,22,9	2102,33	2103,98	2104,19,15,9	2105,153	2106,111	2107,17,10,2	2108,21,5,3	2109,10,5,1	2110,12,9,6
2111,249	2112,16,13,7	2113,385	2114,155	2115,11,10,1	2116,25	2117,24,16,11	2118,385	2119,84	2120,17,14,6
2121,304	2122,91	2123,14,11,3	2124,45	2125,24,17,14	2126,881	2127,539	2128,23,9,1	2129,21	2130,239
2131,13,6,5	2132,213	2133,24,22,4	2134,23,13,2	2135,47	2136,15,12,9	2137,331	2138,13,9,2	2139,14,4,1	2140,283
2141,16,3,1	2142,69	2143,345	2144,13,7,3	2145,19	2146,595	2147,8,3,2	2148,549	2149,17,9,2	2150,569
2151,224	2152,24,13,7	2153,582	2154,10,7,5	2155,10,9,8	2156,405	2157,14,4,1	2158,93	2159,6	2160,31,25,14
2161,766	2162,47	2163,12,9,7	2164,561	2165,10,4,2	2166,693	2167,840	2168,11,9,3	2169,55	2170,411
2171,7,6,4	2172,6,4,1	2173,15,8,4	2174,225	2175,128	2176,15,8,1	2177,554	2178,15	2179,8,7,2	2180,111
2181,18,12,7	2182,93	2183,162	2184,11,10,5	2185,51	2186,51	2187,22,11,1	2188,99	2189,19,8,7	2190,441
2191,111	2192,8,5,3	2193,71	2194,15,13,9	2195,23,22,16	2196,539	2197,6,5,2	2198,893	2199,49	2200,20,15,5
2201,143	2202,15,3,2	2203,14,6,5	2204,11,7,1	2205,14,7,4	2206,793	2207,438	2208,21,16,6	2209,142	2210,539
2211,20,14,3	2212,423	2213,20,19,4	2214,1041	2215,39	2216,24,7,2	2217,455	2218,603	2219,22,12,11	2220,7
2221,17,16,6	2222,333	2223,17,6,2	2224,21,19,5	2225,47	2226,19,16,7	2227,14,9,8	2228,425	2229,17,8,7	2230,637
2231,654	2232,19,17,4	2233,249	2234,7,6,1	2235,20,17,11	2236,63	2237,7,4,2	2238,1053	2239,120	2240,23,7,1
2241,20	2242,7	2243,27,15,2	2244,399	2245,22,12,11	2246,23,15,6	2247,217	2248,9,4,3	2249,126	2250,927
2251,19,16,13	2252,75	2253,19,14,2	2254,10,9,2	2255,729	2256,14,9,6	2257,829	2258,983	2259,16,10,6	2260,12,4,1
2261,14,12,7	2262,57	2263,273	2264,15,7,2	2265,151	2266,343	2267,18,17,8	2268,115	2269,15,10,7	2270,369
2271,560	2272,21,10,9	2273,630	2274,239	2275,15,12,1	2276,21	2277,10,4,2	2278,17,14,7	2279,276	2280,13,4,2
2281,715	2282,975	2283,20,13,4	2284,889	2285,8,6,2	2286,249	2287,651	2288,17,16,7	2289,136	2290,23,6,5
2291,13,10,2	2292,89	2293,10,8,3	2294,21,17,10	2295,259	2296,15,10,1	2297,405	2298,15,13,3	2299,16,6,1	2300,95
2301,15,9,8	2302,15,8,1	2303,80	2304,8,7,5	2305,424	2306,551	2307,11,7,2	2308,31	2309,12,10,8	2310,233
2311,148	2312,19,6,4	2313,221	2314,879	2315,17,15,4	2316,21	2317,17,4,2	2318,245	2319,161	2320,13,11,5
2321,543	2322,83	2323,16,3,2	2324,717	2325,14,8,5	2326,13,10,7	2327,32	2328,15,9,2	2329,105	2330,15,5,1
2331,14	2332,349	2333,18,15,8	2334						

2401,61	2402,251	2403,11,8,2	2404,67	2405,17,14,5	2406,14,12,5	2407,91	2408,23,6,4	2409,1198	2410,807
2411,12,2,1	2412,25	2413,11,6,1	2414,29	2415,154	2416,23,6,5	2417,225	2418,311	2419,22,16,6	2420,77
2421,11,8,4	2422,1117	2423,102	2424,21,16,6	2425,678	2426,20,4,3	2427,8,6,5	2428,301	2429,22,14,7	2430,477
2431,303	2432,29,22,19	2433,305	2434,507	2435,18,6,2	2436,145	2437,9,4,3	2438,929	2439,404	2440,12,7,5
2441,339	2442,127	2443,15,13,4	2444,1115	2445,23,20,10	2446,18,13,6	2447,786	2448,21,10,4	2449,621	2450,191
2451,10,4,3	2452,331	2453,21,14,11	2454,357	2455,313	2456,12,5,3	2457,238	2458,23,20,18	2459,17,7,4	2460,35
2461,19,18,10	2462,22,13,8	2463,1172	2464,5,4,3	2465,531	2466,599	2467,18,14,2	2468,99	2469,26,16,11	2470,217
2471,15,6,3	2472,12,3,1	2473,225	2474,899	2475,12,11,9	2476,17,3,2	2477,19,17,6	2478,765	2479,72	2480,20,5,2
2481,710	2482,11,7,6	2483,12,11,2	2484,523	2485,142	2486,19,14,9	2487,155	2488,23,13,9	2489,315	2490,8,7,5
2491,25,16,12	2492,141	2493,18,15,7	2494,13,8,2	2495,497	2496,12,3,1	2497,1171	2498,8,7,4	2499,13,12,9	2500,135
2501,22,21,5	2502,45	2503,316	2504,19,8,6	2505,131	2506,17,11,3	2507,13,8,1	2508,25	2509,14,13,3	2510,1113
2511,110	2512,29,21,7	2513,99	2514,183	2515,8,7,5	2516,563	2517,14,4,1	2518,18,13,2	2519,579	2520,31,15,13
2521,426	2522,16,10,5	2523,23,17,14	2524,15,6,4	2525,7,6,5	2526,141	2527,640	2528,19,9,4	2529,49	2530,14,5,3
2531,6,2,1	2532,26,22,13	2533,10,3,1	2534,185	2535,24,19,16	2536,21,10,9	2537,77	2538,315	2539,10,9,3	2540,209
2541,11,8,7	2542,97	2543,240	2544,21,20,6	2545,982	2546,891	2547,22,10,3	2548,373	2549,10,9,5	2550,333
2551,103	2552,28,3,2	2553,28	2554,1123	2555,9,6,2	2556,349	2557,18,17,7	2558,18,8,1	2559,23	2560,9,3,1
2561,201	2562,203	2563,12,11,10	2564,561	2565,25,16,14	2566,37	2567,122	2568,8,5,2	2569,69	2570,18,15,14
2571,18,16,9	2572,535	2573,12,11,3	2574,5	2575,867	2576,7,2,1	2577,674	2578,15,7,3	2579,23,6,1	2580,105
2581,26,14,12	2582,22,19,15	2583,31	2584,25,19,12	2585,263	2586,1047	2587,23,12,10	2588,13,8,1	2589,29,11,10	2590,1017
2591,219	2592,15,12,5	2593,297	2594,863	2595,24,17,2	2596,145	2597,16,8,7	2598,225	2599,289	2600,14,13,7
2601,406	2602,11,6,1	2603,18,8,7	2604,435	2605,19,14,5	2606,1181	2607,34	2608,15,11,2	2609,425	2610,427
2611,27,17,10	2612,21,14,6	2613,14,12,9	2614,553	2615,518	2616,17,8,7	2617,462	2618,71	2619,17,10,1	2620,835
2621,8,7,1	2622,11,5,3	2623,409	2624,15,10,4	2625,112	2626,43	2627,20,17,11	2628,47	2629,13,9,6	2630,177
2631,139	2632,19,5,3	2633,1241	2634,20,11,5	2635,25,21,14	2636,18,11,10	2637,9,6,4	2638,10,3,1	2639,144	2640,23,11,9
2641,736	2642,551	2643,16,13,10	2644,597	2645,18,11,10	2646,297	2647,513	2648,15,8,1	2649,689	2650,17,13,5
2651,7,5,4	2652,519	2653,17,4,2	2654,20,16,13	2655,53	2656,19,11,5	2657,242	2658,6,3,2	2659,20,18,16	2660,5
2661,17,14,2	2662,14,12,7	2663,458	2664,27,21,19	2665,772	2666,663	2667,254	2668,819	2669,18,4,2	2670,229
2671,46	2672,18,7,1	2673,530	2674,967	2675,13,10,9	2676,93	2677,17,8,6	2678,15,6,5	2679,286	2680,15,9,4
2681,635	2682,463	2683,11,6,1	2684,14,12,3	2685,8,2,1	2686,789	2687,225	2688,21,10,6	2689,36	2690,12,9,3
2691,14,10,8	2692,577	2693,10,5,3	2694,621	2695,123	2696,17,15,12	2697,170	2698,963	2699,32,30,29	2700,3
2701,12,10,5	2702,257	2703,67	2704,12,9,7	2705,12,10,5	2706,515	2707,9,6,4	2708,423	2709,10,9,3	2710,7,3,1
2711,690	2712,21,12,7	2713,840	2714,12,8,7	2715,30,26,15	2716,255	2717,14,8,3	2718,369	2719,102	2720,25,18,1
2721,826	2722,127	2723,9,6,5	2724,121	2725,21,17,2	2726,10,6,1	2727,430	2728,21,7,5	2729,96	2730,343
2731,15,11,2	2732,845	2733,19,8,7	2734,9,5,4	2735,933	2736,16,3,1	2737,226	2738,923	2739,12,9,5	2740,109
2741,6,5,4	2742,149	2743,447	2744,19,18,10	2745,484	2746,9,7,2	2747,15,11,6	2748,25	2749,22,18,17	2750,629
2751,49	2752,15,4,2	2753,716	2754,231	2755,13,7,6	2756,159	2757,24,23,12	2758,17,5,4	2759,842	2760,29,26,7
2761,108	2762,1319	2763,12,10,6	2764,687	2765,16,10,3	2766,1285	2767,102	2768,25,19,15	2769,269	2770,567
2771,13,12,5	2772,135	2773,30,25,20	2774,28,3,2	2775,802	2776,7,3,2	2777,22,21,17	2778,1095	2779,20,17,9	2780,51
2781,28,27,10	2782,22,10,9	2783,168	2784,29,21,15	2785,349	2786,339	2787,19,18,3	2788,21,16,2	2789,14,12,8	2790,837
2791,490	2792,12,7,2	2793,343	2794,11,9,4	2795,10,8,4	2796,769	2797,19,6,1	2798,20,14,5	2799,880	2800,17,14,6
2801,279	2802,18,14,3	2803,18,16,13	2804,609	2805,24,8,2	2806,729	2807,270	2808,15,13,1	2809,1342	2810,23,10,9
2811,10,9,7	2812,453	2813,13,7,6	2814,621	2815,84	2816,21,19,8	2817,109	2818,15,9,1	2819,10,6,5	2820,815
2821,16,6,4	2822,18,17,3	2823,592	2824,15,14,10	2825,288	2826,135	2827,19,10,6	2828,1103	2829,9,6,4	2830,17,15,13
2831,186	2832,27,18,1	2833,409	2834,15,13,7	2835,20,13,5	2836,1113	2837,17,8,3	2838,20,4,1	2839,1033	2840,20,15,9
2841,370	2842,1231	2843,7,3,2	2844,25	2845,10,9,1	2846,23,15,4	2847,329	2848,15,8,1	2849,114	2850,1411
2851,10,7,1	2852,1145	2853,14,8,1	2854,313	2855,41	2856,15,13,3	2857,756	2858,17,9,7	2859,29,20,11	2860,603
2861,20,16,10	2862,405	2863,139	2864,21,17,15	2865,212	2866,9,7,2	2867,15,13,10	2868,915	2869,8,6,1	2870,12,11,1
2871,272	2872,21,5,2	2873,75	2874,13,6,3	2875,20,16,2	2876,605	2877,10,7,4	2878,781	2879,149	2880,13,10,6
2881,1201	2882,1431	2883,16,13,12	2884,529	2885,13,11,6	2886,20,14,9	2887,469	2888,11,4,1	2889,76	2890,31
2891,16,15,10	2892,309	2893,27,7,2	2894,16,14,9	2895,358	2896,29,6,1	2897,15	2898,91	2899,19,10,1	2900,303
2901,11,3,2	2902,14,10,9	2903,279	2904,27,15,6	2905,321	2906,1155	2907,17,14,1	2908,19,13,10	2909,23,22,4	2910,1301
2911,685	2912,16,9,2	2913,238	2914,351	2915,18,7,5	2916,21	2917,16,15,4	2918,237	2919,149	2920,19,9,5
2921,480	2922,559	2923,11,6,5	2924,12,4,1	2925,12,4,3	2926,20,14,1	2927,974	2928,24,21,11	2929,651	2930,9,4,1
2931,13,8,1	2932,14,7,6	2933,15,14,13	2934,713	2935,13,12,7	2936,5,3,2	2937,172	2938,499	2939,30,17,5	2940,49
2941,23,18,17	2942,1425	2943,320	2944,5,3,2	2945,146	2946,551	2947,22,20,11	2948,17,3,2	2949,17,7,4	2950,397
2951,872	2952,17,13,2	2953,33	2954,9,6,5	2955,12,10,6	2956,823	2957,19,14,3	2958,23,13,5	2959,69	2960,12,3,2
2961,86	2962,319	2963,21,14,5	2964,83	2965,25,22,15	2966,861	2967,1028	2968,29,27,4	2969,561	2970,583
2971,18,13,2	2972,693	2973,18,10,4	2974,11,3,1	2975,192	2976,21,10,3	2977,126	2978,375	2979,12,11,6	2980,381
2981,13,2,1	2982,669	2983,330	2984,17,9,6	2985,166	2986,343	2987,8,3,2	2988,313	2989,18,9,7	2990,26,22,9
2991,292	2992,23,3,1	2993,569	2994,303	2995,9,6,4	2996,345	2997,12,6,5	2998,669	2999,1011	3000,15,12,9
3001,975	3002,22,21,10	3003,12,11,5	3004,351	3005,14,12,5	3006,15,9,6	3007,963	3008,15,13,1	3009,1349	3010,25,12,10
3011,22,8,6	3012,1237	3013,23,6,2	3014,17,15,5	3015,308	3016,38,25,9	3017,108	3018,203	3019,16,6,1	3020,413
3021,22,10,1	3022,14,12,1	3023,734	3024,32,3,2	3025,757	3026,19,18,13	3027,17,16,4	3028,135	3029,11,6,4	3030,12,9,4
3031,55	3032,17,15,4	3033,238	3034,399	3035,21,20,2	3036,391	3037,7,6,3	3038,633	3039,436	3040,27,21,3
3041,776	3042,415	3043,18,16,15	3044,69	3045,17,14,11	3046,1021	3047,19,15,4	3048,18,3,2	3049,765	3050,651
3051,19,17,16	3052,363	3053,22,20,15	3054,21,4,3	3055,13,7,1	3056,5,4,3	3057,110	3058,811	3059,15,10,1	3060,405
3061,22,15,1	3062,1053	3063,32	3064,25,11,9	3065,432	3066,455	3067,18,16,13	3068,215	3069,34,26,19	3070,20,13,8
3071,65	3072,11,10,5	3073,184	3074,17,9,3	3075,16,14,10	3076,475	3077,12,10,8	3078,105	3079,174	3080,21,19,16
3081,64	3082,9,6,1	3083,23,20,18	3084,109	3085,25,14,12	3086,1281	3087,49	3088,20,13,11	3089,261	3090,279
3091,12,7,5	3092,45	3093,14,11,8	3094,769	3095,419	3096,33,29,14	3097,1162	3098,18,17,11	3099,14,13,11	3100,45
3101,10,7,3	3102,225	3103,124	3104,23,9,5	3105,833	3106,6,2,1	3107,14,12,11	3108,61	3109,26,20,19	3110,1421
3111,199	3112,17,15,1	3113,191	3114,19,15,4	3115,25,18,16	3116,461	3117,19,8,4	3118,525	3119,315	3120,18,17,11
3121,493	3122,22,7,6	3123,15,10,4	3124,861	3125,24,21,18	312				

3201,674	3202,24,12,3	3203,14,7,3	3204,31	3205,17,9,2	3206,15,8,6	3207,704	3208,16,13,3	3209,81	3210,1303
3211,12,10,5	3212,1559	3213,30,16,1	3214,1197	3215,614	3216,21,11,3	3217,67	3218,10,9,8	3219,24,10,3	3220,19
3221,11,6,5	3222,145	3223,784	3224,23,19,1	3225,101	3226,9,7,5	3227,8,7,6	3228,1225	3229,12,9,7	3230,501
3231,15,9,8	3232,12,9,7	3233,575	3234,511	3235,21,11,8	3236,887	3237,19,8,4	3238,409	3239,98	3240,12,3,2
3241,127	3242,27,13,7	3243,22,13,5	3244,1249	3245,11,10,4	3246,1221	3247,426	3248,15,8,1	3249,149	3250,15,11,8
3251,9,6,5	3252,567	3253,10,5,3	3254,1485	3255,124	3256,31,26,2	3257,806	3258,203	3259,22,4,1	3260,237
3261,18,12,10	3262,15,13,7	3263,939	3264,17,5,2	3265,18,16,7	3266,19,2,1	3267,20,19,10	3268,73	3269,22,3,2	3270,237
3271,333	3272,23,10,1	3273,1408	3274,775	3275,24,13,10	3276,69	3277,25,22,1	3278,22,12,1	3279,446	3280,16,15,6
3281,47	3282,783	3283,30,28,21	3284,24,17,13	3285,18,4,1	3286,397	3287,717	3288,21,18,11	3289,43	3290,11,7,3
3291,18,7,1	3292,61	3293,20,18,15	3294,249	3295,594	3296,19,14,13	3297,7	3298,639	3299,18,17,14	3300,55
3301,24,10,4	3302,605	3303,1336	3304,19,17,3	3305,806	3306,127	3307,15,10,2	3308,717	3309,23,20,6	3310,1
3311,618	3312,14,9,3	3313,436	3314,1019	3315,12,8,2	3316,1641	3317,22,17,7	3318,585	3319,58	3320,17,10,4
3321,20	3322,567	3323,28,14,10	3324,173	3325,25,19,10	3326,1145	3327,875	3328,17,9,2	3329,525	3330,191
3331,18,17,11	3332,587	3333,16,8,7	3334,6,4,1	3335,636	3336,11,10,5	3337,370	3338,1155	3339,22,16,12	3340,11,7,5
3341,25,19,12	3342,9,6,5	3343,73	3344,30,27,15	3345,796	3346,15,6,1	3347,23,18,16	3348,177	3349,20,19,17	3350,1401
3351,731	3352,21,20,19	3353,389	3354,10,9,3	3355,10,6,4	3356,339	3357,24,17,15	3358,19,8,6	3359,99	3360,18,15,5
3361,12,10,4	3362,11,7,4	3363,14,10,2	3364,85	3365,24,15,2	3366,257	3367,136	3368,7,5,1	3369,1541	3370,15,10,1
3371,30,29,18	3372,47	3373,14,6,4	3374,417	3375,49	3376,11,9,1	3377,236	3378,623	3379,25,20,9	3380,659
3381,7,4,1	3382,217	3383,956	3384,21,9,3	3385,603	3386,19,9,2	3387,26,25,16	3388,169	3389,17,15,4	3390,1381
3391,465	3392,23,13,6	3393,1615	3394,13,12,3	3395,22,10,6	3396,13,6,1	3397,19,4,1	3398,245	3399,416	3400,14,13,6
3401,531	3402,387	3403,15,12,6	3404,173	3405,24,9,2	3406,22,13,12	3407,507	3408,16,15,6	3409,244	3410,1023
3411,14,8,5	3412,325	3413,14,9,6	3414,93	3415,1272	3416,28,27,1	3417,32	3418,15	3419,12,9,3	3420,423
3421,19,14,5	3422,1121	3423,11	3424,22,15,6	3425,189	3426,1071	3427,16,12,1	3428,17,16,13	3429,16,12,6	3430,153
3431,153	3432,25,2,1	3433,28,25,12	3434,14,13,12	3435,15,14,5	3436,159	3437,18,16,10	3438,393	3439,147	3440,27,16,1
3441,394	3442,8,7,3	3443,26,19,3	3444,69	3445,21,5,2	3446,21,17,8	3447,404	3448,17,11,6	3449,917	3450,11,8,3
3451,19,14,9	3452,1145	3453,16,6,1	3454,25,23,21	3455,21	3456,19,18,9	3457,120	3458,519	3459,19,18,12	3460,1495
3461,20,10,7	3462,225	3463,289	3464,11,6,3	3465,304	3466,43	3467,28,26,6	3468,921	3469,38,16,6	3470,917
3471,314	3472,17,14,7	3473,720	3474,735	3475,30,16,13	3476,525	3477,16,15,12	3478,465	3479,155	3480,19,15,13
3481,546	3482,15,5,4	3483,12,5,2	3484,1329	3485,8,7,4	3486,1085	3487,120	3488,12,11,1	3489,518	3490,16,12,3
3491,19,14,7	3492,57	3493,19,18,1	3494,25,19,9	3495,254	3496,35,21,4	3497,1025	3498,567	3499,29,24,4	3500,375
3501,15,8,2	3502,15,13,6	3503,993	3504,23,17,10	3505,103	3506,13,5,3	3507,21,14,6	3508,10,7,6	3509,23,12,7	3510,81
3511,1141	3512,37,35,6	3513,41	3514,11,9,4	3515,17,10,9	3516,667	3517,22,14,12	3518,16,14,9	3519,569	3520,32,29,3
3521,129	3522,399	3523,23,12,2	3524,1439	3525,10,7,5	3526,12,11,10	3527,476	3528,25,18,7	3529,270	3530,10,9,5
3531,18,3,1	3532,1561	3533,30,3,2	3534,973	3535,162	3536,12,7,5	3537,218	3538,13,6,5	3539,16,2,1	3540,75
3541,23,7,2	3542,345	3543,377	3544,21,14,2	3545,998	3546,151	3547,26,23,12	3548,255	3549,14,6,3	3550,1269
3551,183	3552,15,9,6	3553,13,3,2	3554,24,23,17	3555,28,25,15	3556,127	3557,14,8,5	3558,397	3559,69	3560,17,3,2
3561,257	3562,927	3563,18,15,6	3564,225	3565,22,17,12	3566,8,6,1	3567,24,20,12	3568,21,12,10	3569,1028	3570,699
3571,30,13,3	3572,1143	3573,13,8,2	3574,889	3575,339	3576,19,10,3	3577,348	3578,17,9,5	3579,20,14,6	3580,915
3581,22,15,2	3582,713	3583,747	3584,25,12,10	3585,7	3586,19,14,8	3587,26,6,5	3588,843	3589,30,28,8	3590,1713
3591,509	3592,38,33,14	3593,72	3594,59	3595,28,14,2	3596,383	3597,22,9,3	3598,24,5,1	3599,114	3600,9,5,2
3601,669	3602,10,2,1	3603,23,11,6	3604,637	3605,8,7,4	3606,861	3607,142	3608,15,14,10	3609,1016	3610,12,5,2
3611,18,7,1	3612,215	3613,17,7,6	3614,29	3615,47	3616,25,18,7	3617,377	3618,1539	3619,13,12,5	3620,231
3621,22,21,16	3622,481	3623,10,9,7	3624,29,27,12	3625,279	3626,26,25,13	3627,6,4	3628,957	3629,15,10,2	3630,729
3631,90	3632,26,17,5	3633,553	3634,651	3635,15,8,2	3636,391	3637,7,6,5	3638,28,8,1	3639,76	3640,20,15,10
3641,1626	3642,771	3643,14,13,8	3644,1365	3645,21,14,6	3646,20,17,6	3647,445	3648,23,7,2	3649,394	3650,1691
3651,15,13,6	3652,721	3653,10,9,8	3654,273	3655,112	3656,17,12,11	3657,928	3658,1471	3659,18,13,2	3660,61
3661,16,11,6	3662,1365	3663,130	3664,35,24,14	3665,189	3666,30,20,11	3667,15,6,4	3668,269	3669,22,7,4	3670,23,4,3
3671,101	3672,19,17,8	3673,544	3674,27,15,11	3675,30,10,9	3676,609	3677,25,20,7	3678,501	3679,21	3680,14,13,7
3681,115	3682,471	3683,15,13,10	3684,81	3685,9,4,3	3686,81	3687,889	3688,32,13,11	3689,759	3690,839
3691,26,9,2	3692,6,5,3	3693,26,20,18	3694,1129	3695,62	3696,36,33,22	3697,9,1	3698,1719	3699,24,21,5	3700,675
3701,4,2,1	3702,1281	3703,429	3704,14,13,1	3705,148	3706,1195	3707,11,6,1	3708,147	3709,16,14,6	3710,797
3711,1735	3712,13,12,7	3713,413	3714,459	3715,20,18,11	3716,24,11,4	3717,18,15,4	3718,23,18,10	3719,488	3720,17,15,11
3721,31	3722,15,7,5	3723,18,6,4	3724,10,9,8	3725,21,14,8	3726,609	3727,42	3728,9,4,2	3729,184	3730,1191
3731,26,20,5	3732,1327	3733,8,7,3	3734,1305	3735,46	3736,33,22,18	3737,287	3738,75	3739,18,10,5	3740,95
3741,16,15,4	3742,25,18,11	3743,279	3744,27,14,2	3745,684	3746,22,9,7	3747,32,22,11	3748,19,11,8	3749,15,4,1	3750,1013
3751,435	3752,9,4,2	3753,407	3754,1611	3755,15,13,8	3756,291	3757,18,16,5	3758,21,20,9	3759,208	3760,23,9,1
3761,30	3762,383	3763,23,10,2	3764,1307	3765,28,19,12	3766,21,15,1	3767,672	3768,14,7,2	3769,300	3770,107
3771,13,10,9	3772,61	3773,10,9,4	3774,24,9,4	3775,1416	3776,7,5,4	3777,1414	3778,9,5,1	3779,23,8,2	3780,63
3781,10,9,6	3782,1785	3783,272	3784,29,13,6	3785,87	3786,1027	3787,14,6,1	3788,1173	3789,16,15,4	3790,22,21,17
3791,45	3792,20,7,5	3793,481	3794,17,4,3	3795,8,7,5	3796,127	3797,16,8,6	3798,1337	3799,202	3800,24,23,21
3801,112	3802,16,15,8	3803,18,15,6	3804,349	3805,18,12,9	3806,9,7,5	3807,688	3808,29,18,4	3809,938	3810,323
3811,9,8,4	3812,1799	3813,11,8,7	3814,22,21,11	3815,143	3816,19,13,9	3817,252	3818,17,8,6	3819,16,6,3	3820,20,11,3
3821,8,7,6	3822,29	3823,609	3824,19,13,2	3825,437	3826,23,8,1	3827,18,13,8	3828,1217	3829,13,9,6	3830,713
3831,310	3832,35,13,2	3833,35	3834,567	3835,15,5,4	3836,681	3837,22,18,3	3838,273	3839,503	3840,27,9,1
3841,840	3842,1331	3843,16,5,2	3844,1063	3845,11,10,9	3846,693	3847,108	3848,29,18,13	3849,71	3850,583
3851,29,24,19	3852,169	3853,12,7,5	3854,765	3855,1399	3856,39,25,3	3857,50	3858,459	3859,14,8,7	3860,35
3861,31,10,2	3862,18,16,5	3863,834	3864,19,15,9	3865,289	3866,315	3867,20,14,6	3868,13,12,9	3869,24,22,13	3870,913
3871,264	3872,10,3,2	3873,32	3874,20,8,3	3875,11,10,4	3876,157	3877,17,11,4	3878,19,9,2	3879,121	3880,27,5,1
3881,810	3882,1775	3883,20,9,2	3884,45	3885,15,8,3	3886,273	3887,915	3888,45,42,6	3889,340	3890,20,19,10
3891,17,9,2	3892,289	3893,16,13,2	3894,1197	3895,777	3896,15,7,5	3897,310	3898,25,9,1	3899,21,20,12	3900,65
3901,26,6,1	3902,1845	3903,350	3904,17,13,2	3905,26	3906,251	3907,15,4,1	3908,855	3909,14,12,11	3910,28,22,13
3911,1673	3912,24,11,2	3913,393	3914,531	3915,25,22,9	3916,445	3917,16,12,11	3918,117	3919,285	3920,15,13,8
3921,785	3922,26,21,1	3923,24,							

4001,137	4002,24,11,6	4003,14,12,5	4004,1479	4005,17,12,2	4006,17,6,1	4007,705	4008,24,9,6	4009,124	4010,18,15,2
4011,28,15,9	4012,21,20,8	4013,18,17,15	4014,125	4015,249	4016,33,32,23	4017,22	4018,1467	4019,7,6,1	4020,375
4021,24,19,16	4022,7,4,2	4023,985	4024,16,9,7	4025,599	4026,23,20,10	4027,9,7,4	4028,22,12,7	4029,14,11,4	4030,93
4031,1805	4032,15,13,6	4033,223	4034,1163	4035,25,16,1	4036,157	4037,21,14,10	4038,953	4039,1408	4040,29,20,15
4041,410	4042,23,21,13	4043,6,5,1	4044,1659	4045,22,12,10	4046,981	4047,158	4048,21,5,2	4049,215	4050,71
4051,24,14,7	4052,17	4053,17,14,5	4054,981	4055,854	4056,21,17,6	4057,871	4058,419	4059,13,6,3	4060,435
4061,28,20,10	4062,765	4063,118	4064,33,29,7	4065,356	4066,847	4067,24,8,5	4068,825	4069,18,9,1	4070,1529
4071,661	4072,13,10,6	4073,575	4074,595	4075,21,10,6	4076,19,15,7	4077,24,18,2	4078,29,18,16	4079,224	4080,15,9,6
4081,78	4082,16,10,3	4083,19,10,4	4084,1435	4085,12,11,6	4086,1445	4087,769	4088,15,7,2	4089,463	4090,79
4091,23,12,10	4092,1491	4093,23,22,18	4094,321	4095,616	4096,27,15,1	4097,1232	4098,3	4099,19,18,2	4100,615
4101,18,10,6	4102,57	4103,1278	4104,30,13,3	4105,252	4106,123	4107,27,6,2	4108,1615	4109,19,12,1	4110,16,12,1
4111,201	4112,23,12,1	4113,913	4114,219	4115,16,12,1	4116,245	4117,19,18,13	4118,22,12,1	4119,1015	4120,26,17,9
4121,12,6,3	4122,595	4123,10,9,1	4124,345	4125,2	4126,133	4127,276	4128,31,2,1	4129,1315	4130,21,7,5
4131,18,14,5	4132,873	4133,19,14,12	4134,1045	4135,1554	4136,31,29,15	4137,862	4138,1899	4139,15,7,2	4140,549
4141,28,23,2	4142,525	4143,421	4144,15,10,1	4145,51	4146,131	4147,14,10,5	4148,1857	4149,28,8,2	4150,573
4151,186	4152,25,13,3	4153,20,13,5	4154,231	4155,17,10,7	4156,1165	4157,19,17,10	4158,133	4159,81	4160,27,18,12
4161,1361	4162,2047	4163,22,15,5	4164,2045	4165,18,13,2	4166,645	4167,698	4168,17,10,6	4169,105	4170,387
4171,24,8,1	4172,13,9,5	4173,16,12,10	4174,1297	4175,1698	4176,26,15,5	4177,805	4178,18,2,1	4179,14,6,3	4180,273
4181,26,18,1	4182,1985	4183,1984	4184,29,15,7	4185,341	4186,1411	4187,15,14,6	4188,947	4189,16,10,1	4190,11,7,6
4191,454	4192,15,11,5	4193,200	4194,18,5,2	4195,21,13,2	4196,1565	4197,16,13,6	4198,19,14,6	4199,225	4200,12,5,2
4201,76	4202,1031	4203,10,4,1	4204,1327	4205,8,4,3	4206,381	4207,1846	4208,15,6,3	4209,826	4210,1491
4211,14,12,6	4212,243	4213,18,15,10	4214,473	4215,34	4216,13,3,2	4217,347	4218,287	4219,24,6,4	4220,525
4221,13,10,3	4222,18,10,1	4223,144	4224,8,3,2	4225,9	4226,30,23,10	4227,19,11,2	4228,145	4229,7,6,1	4230,533
4231,756	4232,18,13,7	4233,5	4234,799	4235,15,3,2	4236,459	4237,21,19,14	4238,389	4239,904	4240,31,6,1
4241,273	4242,503	4243,14,12,10	4244,387	4245,26,20,15	4246,273	4247,783	4248,11,6,2	4249,387	4250,7,6,4
4251,23,18,17	4252,28,10,7	4253,21,12,11	4254,11,15,3	4255,754	4256,15,13,8	4257,578	4258,9,7,5	4259,17,12,7	4260,99
4261,23,20,18	4262,1301	4263,217	4264,15,14,5	4265,362	4266,727	4267,24,8,2	4268,147	4269,19,17,16	4270,18,11,7
4271,1775	4272,11,8,1	4273,385	4274,1859	4275,13,12,10	4276,1471	4277,26,3,1	4278,309	4279,945	4280,17,14,5
4281,226	4282,1671	4283,30,27,15	4284,81	4285,20,18,11	4286,12,5,4	4287,679	4288,5,4,3	4289,689	4290,99
4291,18,14,10	4292,22,18,7	4293,20,19,17	4294,9,8,7	4295,302	4296,14,5,2	4297,15,4,2	4298,30,24,11	4299,17,16,14	4300,175
4301,12,11,2	4302,569	4303,84	4304,12,7,2	4305,116	4306,9,5,1	4307,28,24,2	4308,901	4309,23,15,10	4310,13,10,2
4311,455	4312,21,5,2	4313,1016	4314,1071	4315,9,8,4	4316,431	4317,20,18,11	4318,973	4319,1850	4320,21,20,14
4321,390	4322,111	4323,16,6,3	4324,987	4325,22,16,12	4326,485	4327,540	4328,20,17,15	4329,833	4330,1351
4331,12,9,2	4332,593	4333,21,17,10	4334,17,12,6	4335,826	4336,18,11,5	4337,1991	4338,287	4339,25,22,16	4340,725
4341,28,14,11	4342,1477	4343,678	4344,8,7,5	4345,271	4346,1911	4347,10,8,5	4348,429	4349,13,11,10	4350,301
4351,900	4352,33,27,20	4353,1042	4354,11,5,3	4355,24,23,14	4356,667	4357,16,7,6	4358,645	4359,595	4360,21,4,2
4361,272	4362,539	4363,15,8,2	4364,1523	4365,22,12,10	4366,1773	4367,197	4368,27,12,6	4369,154	4370,26,15,11
4371,18,15,5	4372,151	4373,8,7,1	4374,729	4375,253	4376,18,7,1	4377,155	4378,1939	4379,16,13,8	4380,745
4381,22,19,12	4382,1541	4383,886	4384,27,19,17	4385,19,17,10	4386,175	4387,23,18,4	4388,18,8,5	4389,15,10,3	4390,1029
4391,84	4392,20,19,5	4393,15,13,9	4394,1535	4395,33,25,18	4396,925	4397,25,18,11	4398,933	4399,585	4400,37,35,3
4401,394	4402,351	4403,15,14,4	4404,543	4405,21,13,2	4406,137	4407,21,3,2	4408,9,8,7	4409,218	4410,211
4411,22,6,3	4412,1769	4413,23,22,20	4414,19,6,4	4415,1269	4416,31,10,6	4417,442	4418,23,19,7	4419,13,11,8	4420,865
4421,32,22,18	4422,1069	4423,271	4424,21,19,13	4425,533	4426,11,6,1	4427,27,22,16	4428,63	4429,16,6,4	4430,26,14,4
4431,47	4432,25,5,3	4433,350	4434,207	4435,12,5,2	4436,273	4437,20,8,2	4438,8,6,1	4439,869	4440,26,21,14
4441,909	4442,1187	4443,16,6,4	4444,1839	4445,254	4446,589	4447,21	4448,11,9,8	4449,644	4450,1603
4451,17,12,8	4452,905	4453,26,15,2	4454,621	4455,1189	4456,24,9,7	4457,329	4458,255	4459,13,9,6	4460,155
4461,15,10,6	4462,21,16,3	4463,582	4464,13,3,1	4465,351	4466,639	4467,30,29,11	4468,1621	4469,19,18,16	4470,2117
4471,471	4472,30,7,2	4473,112	4474,799	4475,16,5,3	4476,595	4477,37,22,4	4478,25,21,8	4479,1165	4480,28,21,15
4481,273	4482,919	4483,8,7,2	4484,975	4485,8,2,1	4486,1749	4487,843	4488,38,35,13	4489,193	4490,1907
4491,18,7,3	4492,895	4493,22,8,1	4494,401	4495,1	4496,17,10,7	4497,299	4498,23,8,1	4499,27,8,5	4500,5
4501,7,6,1	4502,657	4503,7,5,1	4504,12,9,6	4505,794	4506,13,9,3	4507,14,9,4	4508,285	4509,14,5,4	4510,20,13,9
4511,173	4512,12,3,1	4513,196	4514,323	4515,8,6,3	4516,715	4517,21,16,11	4518,577	4519,1191	4520,39,25,23
4521,650	4522,1327	4523,17,12,7	4524,1339	4525,16,11,8	4526,849	4527,674	4528,23,13,9	4529,345	4530,151
4531,8,5,1	4532,25,22,20	4533,15,4,1	4534,381	4535,993	4536,25,11,7	4537,21	4538,2223	4539,11,8,6	4540,715
4541,12,11,2	4542,897	4543,358	4544,25,14,7	4545,523	4546,27,23,16	4547,6,5,1	4548,831	4549,23,12,7	4550,297
4551,730	4552,34,27,18	4553,704	4554,207	4555,25,22,12	4556,26,21,12	4557,98	4558,1869	4559,1356	4560,14,13,7
4561,835	4562,87	4563,20,11,1	4564,165	4565,18,6,2	4566,905	4567,126	4568,22,17,6	4569,2110	4570,2079
4571,10,6,1	4572,81	4573,24,15,6	4574,69	4575,638	4576,26,19,9	4577,9,8,4	4578,1419	4579,10,6,2	4580,21,12,5
4581,27,13,10	4582,14,12,1	4583,1358	4584,19,15,9	4585,223	4586,483	4587,13,6,1	4588,265	4589,26,18,16	4590,497
4591,1254	4592,21,16,11	4593,22,16,12	4594,30,11,4	4595,15,14,1	4596,371	4597,34,13,12	4598,32,28,9	4599,25	4600,17,14,1
4601,68	4602,675	4603,24,22,5	4604,1907	4605,8,5,2	4606,2013	4607,1026	4608,23,20,13	4609,780	4610,239
4611,23,13,10	4612,1557	4613,27,14,10	4614,965	4615,232	4616,27,23,5	4617,287	4618,975	4619,10,8,7	4620,77
4621,28,15,4	4622,21,20,17	4623,136	4624,26,23,10	4625,42	4626,367	4627,16,8,5	4628,1779	4629,20,3,2	4630,14,3,2
4631,25,17,7	4632,19,16,2	4633,1035	4634,1535	4635,21,16,1	4636,901	4637,18,17,3	4638,30,24,15	4639,448	4640,25,8,7
4641,149	4642,1311	4643,15,13,10	4644,189	4645,24,11,5	4646,16,13,9	4647,959	4648,8,5,3	4649,207	4650,567
4651,29,24,8	4652,95	4653,30,21,13	4654,21,20,1	4655,474	4656,27,25,4	4657,417	4658,1943	4659,8,7,5	4660,885
4661,26,21,2	4662,297	4663,841	4664,37,6,5	4665,1663	4666,24,17,11	4667,36,25,20	4668,917	4669,18,14,10	4670,29,12,2
4671,392	4672,27,25,23	4673,147	4674,10,5,4	4675,26,25,21	4676,603	4677,19,11,10	4678,2245	4679,1146	4680,10,9,3
4681,216	4682,119	4683,35,28,14	4684,819	4685,24,10,1	4686,285	4687,1330	4688,13,7,6	4689,421	4690,283
4691,26,21,3	4692,21	4693,26,13,6	4694,1725	4695,1522	4696,18,17,11	4697,386	4698,351	4699,36,7,5	4700,873
4701,23,21,18	4702,17,3,2	4703,248	4704,11,8,1	4705,1033	4706,2151	4707,17,16,11	4708,1543	4709,21,12,11	4710,2257
4711,426	4712,25,16,6	4713,67	4714,19,17,6	4715,26,24,7	4716,97	4717,30,17,16	4718,16,14,1	4719,466	4720,24,19,9

4801,1146	4802,291	4803,7,5,4	4804,18,15,4	4805,1922	4806,2349	4807,12	4808,13,4,2	4809,91	4810,1171
4811,13,10,2	4812,22,15,13	4813,18,7,6	4814,22,10,9	4815,638	4816,33,31,25	4817,491	4818,459	4819,28,25,7	4820,515
4821,16,13,2	4822,33,17,13	4823,1094	4824,25,16,3	4825,558	4826,24,19,17	4827,29,20,14	4828,913	4829,20,14,2	4830,1493
4831,337	4832,33,30,5	4833,458	4834,19,17,2	4835,28,10,5	4836,301	4837,14,9,1	4838,17,12,7	4839,238	4840,25,21,2
4841,19,13,3	4842,33,29,18	4843,22,21,3	4844,16,15,1	4845,38,21,17	4846,1477	4847,1085	4848,28,27,6	4849,184	4850,243
4851,24,17,2	4852,561	4853,17,7,4	4854,633	4855,172	4856,27,23,21	4857,34	4858,355	4859,25,22,14	4860,81
4861,15,7,6	4862,15,8,1	4863,166	4864,29,22,17	4865,1551	4866,23,15,2	4867,18,11,1	4868,593	4869,22,16,4	4870,213
4871,1251	4872,24,9,2	4873,1798	4874,555	4875,26,16,10	4876,585	4877,23,20,6	4878,1457	4879,1342	4880,32,21,7
4881,1276	4882,28,7,4	4883,26,8,2	4884,91	4885,27,21,12	4886,1989	4887,139	4888,35,21,8	4889,45	4890,1967
4891,25,19,16	4892,2381	4893,15,12,2	4894,469	4895,623	4896,21,19,12	4897,210	4898,25,12,2	4899,33,28,6	4900,697
4901,20,18,14	4902,1253	4903,774	4904,27,18,15	4905,296	4906,22,21,6	4907,14,10,3	4908,111	4909,30,16,11	4910,377
4911,1955	4912,30,29,7	4913,693	4914,259	4915,16,9,1	4916,1793	4917,34,5,4	4918,889	4919,380	4920,11,9,5
4921,277	4922,2387	4923,10,3,1	4924,1545	4925,19,6,2	4926,693	4927,21	4928,29,9,3	4929,49	4930,2143
4931,23,21,18	4932,1039	4933,13,11,8	4934,413	4935,133	4936,27,22,15	4937,63	4938,19,9,3	4939,24,8,1	4940,383
4941,17,14,1	4942,13,12,9	4943,494	4944,19,6,4	4945,1011	4946,23,9,1	4947,24,6,4	4948,601	4949,30,25,2	4950,517
4951,217	4952,29,11,5	4953,938	4954,15,10,7	4955,27,12,5	4956,559	4957,11,6,5	4958,1709	4959,920	4960,25,20,6
4961,843	4962,23,11,6	4963,20,17,15	4964,13,10,5	4965,13,12,6	4966,2205	4967,1292	4968,26,25,17	4969,1084	4970,1131
4971,12,6,2	4972,709	4973,26,22,16	4974,1229	4975,2301	4976,42,7,1	4977,644	4978,315	4979,29,11,8	4980,111
4981,33,15,12	4982,1701	4983,1070	4984,23,16,9	4985,384	4986,239	4987,10,7,4	4988,375	4989,15,8,2	4990,23,19,3
4991,201	4992,15,8,6	4993,39	4994,1791	4995,28,25,19	4996,18,15,13	4997,31,11,6	4998,161	4999,13,11,9	5000,17,15,7
5001,637	5002,33,13,8	5003,18,16,8	5004,671	5005,22,13,6	5006,12,3,2	5007,464	5008,21,10,3	5009,38	5010,17,8,6
5011,29,20,15	5012,33	5013,38,35,15	5014,1197	5015,206	5016,15,12,9	5017,385	5018,731	5019,23,19,2	5020,97
5021,14,11,2	5022,329	5023,777	5024,33,23,14	5025,1379	5026,20,15,11	5027,28,9,5	5028,1089	5029,22,3,2	5030,2373
5031,496	5032,25,6,2	5033,1122	5034,387	5035,24,21,10	5036,1295	5037,22,15,3	5038,45	5039,489	5040,24,5,3
5041,646	5042,1607	5043,23,17,8	5044,1165	5045,25,24,2	5046,17,11,4	5047,415	5048,34,15,10	5049,133	5050,2467
5051,22,17,15	5052,833	5053,26,18,11	5054,1493	5055,211	5056,22,9,6	5057,126	5058,1411	5059,20,19,14	5060,161
5061,16,11,7	5062,141	5063,795	5064,21,12,11	5065,126	5066,783	5067,12,6,2	5068,1635	5069,18,5,3	5070,16,13,7
5071,258	5072,25,5,3	5073,476	5074,2119	5075,18,15,5	5076,1467	5077,18,11,5	5078,2201	5079,35	5080,21,7,6
5081,1562	5082,35	5083,25,19,6	5084,173	5085,20,14,13	5086,23,18,14	5087,210	5088,22,21,3	5089,88	5090,147
5091,18,13,10	5092,843	5093,15,6,2	5094,1377	5095,489	5096,19,18,13	5097,454	5098,243	5099,24,2,1	5100,675
5101,18,16,15	5102,22,18,11	5103,148	5104,30,13,2	5105,72	5106,1307	5107,17,2,1	5108,191	5109,26,19,7	5110,2209
5111,279	5112,42,33,9	5113,559	5114,899	5115,14,8,5	5116,1387	5117,19,14,6	5118,2045	5119,130	5120,33,27,5
5121,457	5122,199	5123,11,8,5	5124,279	5125,23,18,4	5126,22,14,9	5127,1519	5128,24,15,6	5129,1514	5130,603
5131,21,7,4	5132,15	5133,15,11,8	5134,1629	5135,141	5136,27,25,4	5137,1701	5138,1571	5139,36,22,1	5140,1015
5141,24,14,5	5142,12,11,3	5143,1767	5144,15,11,5	5145,308	5146,1771	5147,12,10,2	5148,103	5149,30,22,2	5150,213
5151,724	5152,15,8,1	5153,708	5154,16,5,2	5155,15,14,1	5156,14,6,1	5157,8,6,3	5158,21,20,2	5159,494	5160,35,31,13
5161,315	5162,419	5163,20,17,5	5164,12,7,3	5165,18,16,10	5166,117	5167,2193	5168,15,11,5	5169,1196	5170,1411
5171,18,3,2	5172,2247	5173,23,22,2	5174,189	5175,347	5176,24,21,3	5177,963	5178,15,13,10	5179,30,12,9	5180,2055
5181,23,7,2	5182,16,13,6	5183,1869	5184,20,11,5	5185,373	5186,1755	5187,16,8,5	5188,2305	5189,28,22,2	5190,677
5191,330	5192,11,8,2	5193,1006	5194,25,15,13	5195,27,11,6	5196,617	5197,20,15,7	5198,27,10,8	5199,1546	5200,33,27,19
5201,125	5202,1519	5203,14,4,3	5204,917	5205,9,8,6	5206,465	5207,588	5208,23,22,2	5209,156	5210,2219
5211,20,19,1	5212,487	5213,19,8,7	5214,12,9,8	5215,354	5216,27,19,2	5217,1507	5218,2335	5219,23,3,2	5220,205
5221,12,11,8	5222,1637	5223,1787	5224,29,15,1	5225,503	5226,2607	5227,24,10,7	5228,327	5229,28,19,13	5230,13,12,11
5231,1188	5232,21,11,2	5233,205	5234,275	5235,16,6,1	5236,475	5237,12,10,7	5238,765	5239,549	5240,33,27,21
5241,101	5242,895	5243,10,9,1	5244,2321	5245,28,23,3	5246,2477	5247,235	5248,27,18,1	5249,197	5250,1371
5251,35,25,14	5252,627	5253,24,17,14	5254,1305	5255,167	5256,9,5,2	5257,1537	5258,1359	5259,10,8,4	5260,1455
5261,22,10,9	5262,22,20,1	5263,769	5264,16,11,9	5265,41	5266,483	5267,31,25,14	5268,297	5269,23,6,1	5270,341
5271,1106	5272,29,18,10	5273,1395	5274,17,11,10	5275,16,10,1	5276,609	5277,9,7,6	5278,2337	5279,1299	5280,13,11,1
5281,29,9,4	5282,13,10,9	5283,25,17,2	5284,16,9,5	5285,25,24,23	5286,20,14,7	5287,196	5288,11,10,1	5289,1424	5290,17,9,4
5291,24,18,5	5292,315	5293,25,9,2	5294,14,3,1	5295,1133	5296,8,3,2	5297,446	5298,575	5299,17,12,1	5300,2195
5301,14,8,1	5302,2205	5303,434	5304,27,6,5	5305,1863	5306,15,4,1	5307,12,10,4	5308,18,14,11	5309,7,6,1	5310,837
5311,142	5312,22,3,2	5313,598	5314,7	5315,18,14,3	5316,1067	5317,17,4,3	5318,125	5319,1573	5320,19,17,3
5321,351	5322,1199	5323,15,11,2	5324,15	5325,18,14,11	5326,1545	5327,723	5328,30,27,9	5329,1219	5330,803
5331,18,5,3	5332,171	5333,25,24,19	5334,545	5335,16,15,11	5336,23,21,8	5337,2279	5338,1647	5339,17,16,15	5340,731
5341,22,15,13	5342,27,9,3	5343,485	5344,17,11,10	5345,339	5346,171	5347,24,22,11	5348,2259	5349,16,13,10	5350,15,14,5
5351,707	5352,23,20,1	5353,1419	5354,22,7,6	5355,16,11,12	5356,51	5357,29,24,10	5358,2485	5359,81	5360,19,11,1
5361,35	5362,15,7,1	5363,20,7,1	5364,863	5365,14,13,8	5366,20,3,2	5367,194	5368,19,18,3	5369,152	5370,1919
5371,18,15,6	5372,1151	5373,20,14,13	5374,24,19,14	5375,188	5376,7,4,1	5377,547	5378,1059	5379,23,17,4	5380,423
5381,13,11,10	5382,26,24,17	5383,1509	5384,17,15,4	5385,376	5386,2055	5387,28,21,8	5388,2261	5389,18,10,9	5390,2409
5391,434	5392,7,3,2	5393,215	5394,1523	5395,18,13,11	5396,2255	5397,9,5,2	5398,357	5399,485	5400,33,17,3
5401,420	5402,18,15,9	5403,14,11,6	5404,387	5405,17,14,12	5406,1205	5407,955	5408,30,23,1	5409,1720	5410,2343
5411,28,10,3	5412,917	5413,21,18,7	5414,25,2,1	5415,331	5416,34,31,19	5417,1256	5418,303	5419,25,24,23	5420,945
5421,30,29,6	5422,445	5423,311	5424,16,15,13	5425,186	5426,18,11,8	5427,18,12,11	5428,117	5429,40,22,5	5430,513
5431,2163	5432,37,34,23	5433,791	5434,19,18,15	5435,24,18,14	5436,1229	5437,21,8,2	5438,1289	5439,203	5440,24,15,10
5441,1254	5442,1635	5443,20,10,6	5444,1235	5445,20,19,7	5446,865	5447,860	5448,43,33,15	5449,103	5450,479
5451,30,19,16	5452,2691	5453,13,4,2	5454,893	5455,91	5456,21,14,10	5457,767	5458,1839	5459,36,20,2	5460,29
5461,30,28,5	5462,15,11,1	5463,167	5464,15,5,2	5465,54	5466,32,23,10	5467,22,8,5	5468,95	5469,32,23,2	5470,13,12,1
5471,198	5472,21,15,3	5473,589	5474,1247	5475,18,16,13	5476,30,23,11	5477,23,18,10	5478,305	5479,370	5480,13,10,3
5481,167	5482,20,17,9	5483,22,2,1	5484,1029	5485,16,8,2	5486,14,9,8	5487,1834	5488,21,19,9	5489,1290	5490,1143
5491,24,14,1	5492,135	5493,15,12,7	5494,537	5495,279	5496,13,11,4	5497,1729	5498,19,12,7	5499,29,21,18	5500,175
5501,27,19,2	5502,2357	5503,237	5504,20,19,1	5505,98	5506,23,20,12	5507,15,10,7	5508,729	5509,11,9,4	5510,19,15,2
5511,554	5512,13,11,6	5513,1814	5514,535						

5601,487	5602,963	5603,22,20,4	5604,2251	5605,32,23,1	5606,1905	5607,43	5608,22,5,2	5609,287	5610,271
5611,20,9,7	5612,135	5613,20,17,14	5614,6,3,1	5615,461	5616,30,15,6	5617,6	5618,17,15,2	5619,11,8,6	5620,1251
5621,12,11,4	5622,2465	5623,709	5624,21,18,14	5625,28	5626,943	5627,13,9,8	5628,863	5629,23,12,4	5630,357
5631,1502	5632,17,15,5	5633,143	5634,759	5635,17,10,3	5636,555	5637,8,6,5	5638,20,17,13	5639,1365	5640,29,27,23
5641,568	5642,33,23,2	5643,10,3,1	5644,2233	5645,19,16,2	5646,23,8,5	5647,17,16,9	5648,21,15,8	5649,49	5650,967
5651,10,7,2	5652,929	5653,16,11,5	5654,149	5655,434	5656,27,12,9	5657,165	5658,9,4,3	5659,12,8,2	5660,39
5661,26,14,10	5662,2637	5663,90	5664,31,29,11	5665,714	5666,1215	5667,10,8,1	5668,34,27,3	5669,27,4,1	5670,41
5671,37	5672,26,25,10	5673,82	5674,18,15,13	5675,17,15,4	5676,1259	5677,27,26,2	5678,31,21,8	5679,271	5680,40,17,2
5681,326	5682,35,16,1	5683,22,18,11	5684,87	5685,10,7,5	5686,27,7,3	5687,2007	5688,41,20,11	5689,1384	5690,1623
5691,21,15,4	5692,561	5693,24,4,2	5694,1609	5695,732	5696,26,21,14	5697,19,8,2	5698,14,9,5	5699,12,8,5	5700,705
5701,16,6,5	5702,22,15,8	5703,82	5704,27,25,14	5705,248	5706,2199	5707,24,21,16	5708,1151	5709,22,9,1	5710,409
5711,441	5712,10,9,3	5713,27	5714,1775	5715,28,6,3	5716,14,13,8	5717,21,6,5	5718,1361	5719,375	5720,32,11,2
5721,1562	5722,19,18,14	5723,28,19,6	5724,103	5725,22,9,3	5726,309	5727,1310	5728,25,24,7	5729,515	5730,25,18,10
5731,13,11,8	5732,2267	5733,10,8,5	5734,2629	5735,744	5736,25,18,10	5737,507	5738,30,17,4	5739,18,15,13	5740,115
5741,16,6,4	5742,1085	5743,1621	5744,21,11,8	5745,544	5746,279	5747,13,4,2	5748,18,17,2	5749,26,19,18	5750,377
5751,127	5752,21,20,7	5753,1721	5754,1235	5755,8,7,2	5756,371	5757,22,18,16	5758,805	5759,1431	5760,29,23,10
5761,615	5762,2759	5763,18,13,1	5764,2019	5765,17,10,7	5766,13,10,4	5767,124	5768,21,14,3	5769,83	5770,9,7,2
5771,16,14,13	5772,343	5773,12,11,8	5774,15,5,4	5775,266	5776,19,12,1	5777,134	5778,1071	5779,21,7,4	5780,1535
5781,24,14,6	5782,2377	5783,954	5784,25,22,6	5785,1161	5786,20,19,7	5787,30,20,15	5788,1585	5789,21,14,12	5790,197
5791,2101	5792,33,13,11	5793,437	5794,2383	5795,15,14,3	5796,831	5797,33,26,23	5798,1853	5799,934	5800,25,7,6
5801,129	5802,1015	5803,16,15,10	5804,13,8,1	5805,10,7,3	5806,369	5807,731	5808,43,10,1	5809,369	5810,47
5811,21,17,2	5812,295	5813,14,13,1	5814,2233	5815,1083	5816,17,15,7	5817,343	5818,763	5819,1058	5820,61
5821,18,11,4	5822,2145	5823,916	5824,23,17,10	5825,323	5826,2027	5827,28,16,10	5828,17,8,5	5829,24,6,5	5830,27,23,11
5831,275	5832,21,18,13	5833,264	5834,935	5835,13,5,2	5836,91	5837,13,9,2	5838,153	5839,169	5840,23,14,2
5841,250	5842,21,18,7	5843,20,7,6	5844,1809	5845,18,5,1	5846,20,17,3	5847,1013	5848,19,8,6	5849,105	5850,27
5851,9,6,1	5852,15,13,10	5853,46,36,18	5854,2217	5855,1334	5856,23,15,6	5857,516	5858,2735	5859,28,25,16	5860,1899
5861,16,2,1	5862,18,3,2	5863,58	5864,27,11,10	5865,1249	5866,30,23,2	5867,17,6,2	5868,373	5869,26,23,4	5870,15,9,5
5871,287	5872,19,15,10	5873,113	5874,267	5875,20,13,9	5876,243	5877,37,36,30	5878,24,9,1	5879,2556	5880,21,10,3
5881,81	5882,975	5883,19,6,4	5884,14,11,10	5885,38,29,14	5886,297	5887,142	5888,23,10,4	5889,541	5890,13,8,3
5891,20,15,9	5892,63	5893,28,3,1	5894,21,15,2	5895,781	5896,30,23,1	5897,390	5898,247	5899,35,21,10	5900,125
5901,23,15,12	5902,1981	5903,380	5904,32,19,5	5905,172	5906,23,18,15	5907,25,17,2	5908,2101	5909,34,24,14	5910,449
5911,2545	5912,33,22,13	5913,292	5914,25,13,7	5915,30,29,28	5916,20,15,3	5917,21,12,6	5918,13,12,8	5919,1843	5920,16,15,6
5921,311	5922,495	5923,18,10,5	5924,1017	5925,24,7,3	5926,325	5927,1305	5928,16,7,2	5929,16,6,4	5930,17,13,10
5931,30,26,14	5932,2673	5933,15,11,6	5934,28,25,4	5935,84	5936,27,4,1	5937,49	5938,23,7,3	5939,12,5,3	5940,99
5941,20,18,11	5942,245	5943,1075	5944,23,21,14	5945,9,5,3	5946,33,20,3	5947,14,11,4	5948,117	5949,23,21,18	5950,32,13,8
5951,216	5952,25,23,2	5953,1767	5954,95	5955,28,8,5	5956,385	5957,18,6,2	5958,2297	5959,1864	5960,37,35,25
5961,2081	5962,2599	5963,35,28,6	5964,1475	5965,27,19,12	5966,609	5967,2359	5968,21,14,4	5969,24	5970,399
5971,11,3,2	5972,315	5973,20,8,3	5974,23,19,3	5975,284	5976,18,9,6	5977,657	5978,1151	5979,29,25,2	5980,1951
5981,21,14,13	5982,45	5983,1960	5984,17,7,1	5985,203	5986,895	5987,23,18,4	5988,1067	5989,36,20,2	5990,2729
5991,680	5992,29,9,2	5993,1133	5994,17,9,5	5995,26,25,20	5996,20,18,3	5997,10,8,1	5998,1765	5999,362	6000,23,21,12
6001,648	6002,2895	6003,25,19,14	6004,2287	6005,22,13,8	6006,1025	6007,435	6008,30,27,15	6009,346	6010,2907
6011,36,30,5	6012,533	6013,31,24,16	6014,21,14,9	6015,91	6016,35,34,2	6017,261	6018,1315	6019,19,18,11	6020,645
6021,32,22,17	6022,2217	6023,143	6024,39,33,26	6025,586	6026,915	6027,98	6028,18,8,7	6029,22,17,3	6030,1377
6031,613	6032,44,21,14	6033,406	6034,439	6035,28,14,13	6036,1577	6037,10,7,1	6038,21,17,11	6039,1556	6040,25,11,5
6041,1476	6042,21,3,2	6043,15,12,6	6044,2525	6045,19,16,10	6046,16,3,2	6047,411	6048,17,15,8	6049,988	6050,1227
6051,34,17,1	6052,127	6053,15,11,2	6054,24,22,21	6055,1242	6056,7,6,1	6057,2378	6058,1155	6059,39,34,20	6060,243
6061,31,25,6	6062,15,7,2	6063,28,24,9	6064,23,18,11	6065,129	6066,67	6067,30,18,10	6068,1149	6069,21,5,2	6070,37
6071,789	6072,28,15,13	6073,1753	6074,35	6075,26,24,6	6076,1387	6077,17,11,8	6078,1241	6079,382	6080,19,8,6
6081,1081	6082,20,2,1	6083,33,26,6	6084,279	6085,16,13,7	6086,557	6087,1948	6088,23,10,3	6089,1062	6090,11
6091,15,9,4	6092,1475	6093,14,9,6	6094,973	6095,2186	6096,20,11,2	6097,346	6098,1395	6099,22,16,14	6100,577
6101,24,20,11	6102,22,17,16	6103,376	6104,13,11,6	6105,823	6106,2079	6107,23,12,10	6108,213	6109,17,11,4	6110,26,19,13
6111,467	6112,35,12,1	6113,1283	6114,11,6,5	6115,22,19,10	6116,873	6117,34,33,30	6118,1765	6119,287	6120,4,3,1
6121,490	6122,32,24,11	6123,25,22,6	6124,19	6125,22,8,6	6126,20,15,5	6127,31,9,4	6128,34,15,2	6129,1421	6130,24,22,7
6131,36,34,7	6132,135	6133,16,7,3	6134,2445	6135,572	6136,17,7,5	6137,1682	6138,26,11,10	6139,14,13,3	6140,135
6141,16,13,6	6142,2245	6143,1005	6144,26,7,1	6145,348	6146,71	6147,29,24,6	6148,25,18,16	6149,23,20,14	6150,1297
6151,538	6152,28,27,13	6153,77	6154,23,12,10	6155,34,33,4	6156,25	6157,17,16,14	6158,14,6,5	6159,1165	6160,38,15,10
6161,1556	6162,603	6163,17,12,7	6164,1179	6165,25,15,12	6166,5,4,2	6167,33	6168,20,11,2	6169,1204	6170,1179
6171,22,10,8	6172,3	6173,10,9,1	6174,1029	6175,823	6176,29,15,1	6177,430	6178,1719	6179,16,8,1	6180,245
6181,22,13,6	6182,1773	6183,56	6184,39,13,12	6185,308	6186,15,6,4	6187,26,25,18	6188,1223	6189,26,8,5	6190,877
6191,1074	6192,20,5,2	6193,919	6194,21,9,2	6195,30,24,23	6196,1807	6197,25,14,4	6198,213	6199,109	6200,29,10,7
6201,922	6202,867	6203,20,15,10	6204,691	6205,14,12,1	6206,22,7,5	6207,1363	6208,25,23,14	6209,935	6210,711
6211,19,18,5	6212,27,16,14	6213,15,14,12	6214,913	6215,134	6216,39,30,9	6217,711	6218,383	6219,17,14,4	6220,889
6221,21,12,3	6222,693	6223,1033	6224,13,4,2	6225,317	6226,1035	6227,18,9,8	6228,2691	6229,12,7,6	6230,1317
6231,359	6232,17,3,1	6233,777	6234,22,18,7	6235,23,18,10	6236,1701	6237,32,14,9	6238,2353	6239,921	6240,11,10,2
6241,592	6242,32,28,27	6243,17,10,5	6244,475	6245,28,26,4	6246,1565	6247,586	6248,18,7,2	6249,1000	6250,363
6251,35,34,31	6252,15,10,6	6253,14,10,2	6254,30,29,4	6255,2318	6256,11,10,5	6257,852	6258,647	6259,18,12,3	6260,1601
6261,17,14,12	6262,261	6263,1466	6264,17,16,7	6265,502	6266,10,7,5	6267,26,8,5	6268,973	6269,31,8,3	6270,737
6271,54	6272,17,10,6	6273,1106	6274,999	6275,15,14,5	6276,1787	6277,16,10,6	6278,749	6279,290	6280,9,7,5
6281,2021	6282,1895	6283,14,11,4	6284,16,13,8	6285,26,14,5	6286,741	6287,104	6288,34,25,5	6289,237	6290,1127
6291,29,6,5	6292,2317	6293,30,20,18	6294,57	6295,82	6296,35,19,10	6297,190	6298,15,10,1	6299,25,13,2	6300,7
6301,17,8,7	6302,2105	6303,467	6304,13,3,1	6305,1052	6306,2079	6307,28,27,5	6308,405	6309,23,13,10	6310,11,7,2
6311,1155	6312,35,33,14	6313,35							

6401,1146	6402,947	6403,15,10,4	6404,1779	6405,18,10,7	6406,613	6407,231	6408,31,12,10	6409,72	6410,18,15,2
6411,23,18,14	6412,1131	6413,18,17,10	6414,34,15,9	6415,663	6416,29,15,7	6417,19	6418,1095	6419,9,7,4	6420,903
6421,24,16,14	6422,621	6423,26,19,1	6424,29,18,5	6425,231	6426,207	6427,35,29,18	6428,791	6429,18,16,13	6430,1333
6431,3	6432,26,13,7	6433,810	6434,651	6435,15,9,4	6436,1141	6437,23,18,4	6438,425	6439,630	6440,21,18,14
6441,41	6442,19,18,5	6443,25,17,16	6444,1647	6445,30,10,4	6446,2633	6447,1547	6448,25,23,8	6449,777	6450,1707
6451,26,14,13	6452,381	6453,29,24,14	6454,825	6455,732	6456,31,25,17	6457,840	6458,119	6459,25,17,2	6460,2073
6461,36,15,6	6462,24,3,2	6463,93	6464,25,22,6	6465,224	6466,26,8,7	6467,7,6,2	6468,217	6469,24,22,6	6470,477
6471,1910	6472,31,30,2	6473,1211	6474,563	6475,18,13,2	6476,1535	6477,31,18,15	6478,213	6479,84	6480,11,10,1
6481,538	6482,17,8,3	6483,10,5,1	6484,43	6485,21,8,6	6486,23,11,1	6487,880	6488,21,13,7	6489,706	6490,111
6491,17,16,6	6492,1169	6493,38,11,4	6494,29,27,5	6495,283	6496,21,5,2	6497,1736	6498,2079	6499,26,9,2	6500,375
6501,24,21,14	6502,465	6503,330	6504,23,15,9	6505,1911	6506,15,7,5	6507,25,12,9	6508,20,11,3	6509,14,12,7	6510,61
6511,2673	6512,29,27,13	6513,682	6514,2571	6515,27,26,12	6516,18,12,3	6517,24,11,2	6518,513	6519,725	6520,37,29,11
6521,695	6522,675	6523,12,6,3	6524,1283	6525,16,12,10	6526,2137	6527,242	6528,16,7,2	6529,765	6530,15,9,5
6531,17,14,12	6532,15,10,7	6533,18,11,9	6534,45	6535,31	6536,25,10,9	6537,542	6538,31	6539,12,8,2	6540,333
6541,14,11,7	6542,33,29,9	6543,28,21,7	6544,19,15,1	6545,1322	6546,279	6547,12,11,10	6548,945	6549,34,15,6	6550,2401
6551,941	6552,27,22,6	6553,265	6554,159	6555,28,24,22	6556,885	6557,34,30,17	6558,153	6559,879	6560,19,13,11
6561,1834	6562,651	6563,35,30,21	6564,525	6565,19,15,8	6566,10,3,1	6567,1112	6568,19,15,1	6569,1410	6570,1323
6571,14,13,6	6572,20,15,11	6573,17,10,5	6574,29,15,14	6575,884	6576,27,25,19	6577,2341	6578,1587	6579,32,15,6	6580,2577
6581,10,8,6	6582,17,13,8	6583,859	6584,37,23,7	6585,476	6586,34,32,15	6587,27,4,2	6588,1617	6589,30,25,7	6590,957
6591,1999	6592,45,42,1	6593,279	6594,2679	6595,33,8,5	6596,665	6597,18,14,5	6598,885	6599,189	6600,21,19,16
6601,457	6602,14,8,3	6603,30,20,8	6604,1279	6605,25,15,14	6606,2365	6607,813	6608,9,4,2	6609,286	6610,27,26,8
6611,13,10,3	6612,289	6613,28,22,15	6614,2105	6615,136	6616,33,9,3	6617,71	6618,2379	6619,7,6,1	6620,341
6621,21,19,6	6622,645	6623,491	6624,15,14,9	6625,549	6626,20,3,1	6627,26,7,5	6628,2259	6629,11,9,4	6630,1617
6631,823	6632,27,20,17	6633,535	6634,559	6635,14,13,9	6636,1189	6637,29,26,21	6638,3185	6639,2135	6640,43,32,9
6641,167	6642,1063	6643,42,25,9	6644,917	6645,23,18,3	6646,9,8,5	6647,77	6648,25,19,16	6649,202	6650,1391
6651,22,19,14	6652,1143	6653,8,7,3	6654,1809	6655,54	6656,19,15,1	6657,839	6658,31,30,19	6659,20,16,1	6660,475
6661,14,12,1	6662,2901	6663,416	6664,24,15,6	6665,147	6666,999	6667,13,8,2	6668,221	6669,16,7,5	6670,673
6671,930	6672,26,21,5	6673,256	6674,983	6675,16,10,1	6676,3141	6677,26,9,7	6678,41	6679,550	6680,29,7,3
6681,124	6682,38,21,5	6683,12,5,3	6684,1275	6685,18,11,1	6686,617	6687,872	6688,55,32,9	6689,1764	6690,1911
6691,15,12,1	6692,2237	6693,10,6,4	6694,2989	6695,3072	6696,45,19,7	6697,2613	6698,18,14,11	6699,14,12,3	6700,625
6701,19,8,4	6702,1145	6703,675	6704,11,10,6	6705,218	6706,1683	6707,32,25,15,14	6708,189	6709,18,12,7	6710,1397
6711,2929	6712,31,26,2	6713,11	6714,751	6715,17,6,1	6716,1781	6717,16,11,7	6718,14,9,7	6719,455	6720,12,9,7
6721,210	6722,2387	6723,21,18,4	6724,1017	6725,23,3,2	6726,21	6727,397	6728,21,8,2	6729,631	6730,3
6731,32,27,6	6732,965	6733,8,5,3	6734,21,14,9	6735,1241	6736,27,14,2	6737,1197	6738,35,24,5	6739,29,24,1	6740,41
6741,18,15,11	6742,9,4,3	6743,240	6744,29,21,15	6745,136	6746,1563	6747,22,21,1	6748,1273	6749,18,16,4	6750,2781
6751,1104	6752,11,8,2	6753,35	6754,1483	6755,30,20,3	6756,225	6757,466	6758,3105	6759,29	6760,37,15,7
6761,15	6762,28,4,3	6763,32,21,11	6764,989	6765,23,3,2	6766,17,5,4	6767,300	6768,18,15,10	6769,97	6770,34,31,24
6771,36,13,12	6772,321	6773,32,20,6	6774,733	6775,1293	6776,25,11,6	6777,925	6778,34,33,1	6779,16,6,2	6780,655
6781,16,15,4	6782,3321	6783,518	6784,16,15,1	6785,452	6786,171	6787,25,5,2	6788,2345	6789,28,19,9	6790,22,8,5
6791,107	6792,27,25,24	6793,571	6794,707	6795,17,2,1	6796,895	6797,20,10,6	6798,1029	6799,1240	6800,26,25,1
6801,140	6802,29,25,3	6803,32,21,16	6804,49	6805,24,20,7	6806,25,23,16	6807,1568	6808,37,19,13	6809,27,10,5	6810,679
6811,21,20,8	6812,1115	6813,24,19,16	6814,32,26,25	6815,518	6816,22,5,2	6817,682	6818,1571	6819,21,11,8	6820,747
6821,19,13,8	6822,1425	6823,14,5,1	6824,21,14,10	6825,133	6826,435	6827,26,12,8	6828,63	6829,20,16,6	6830,537
6831,115	6832,35,32,25	6833,35	6834,23,14,1	6835,23,4,2	6836,473	6837,21,17,14	6838,357	6839,96	6840,14,9,3
6841,427	6842,18,17,7	6843,26,9,6	6844,20,15,5	6845,26,20,6	6846,2497	6847,2247	6848,29,22,18	6849,221	6850,21,7,4
6851,31,30,4	6852,839	6853,28,27,15	6854,21,14,1	6855,254	6856,30,29,17	6857,386	6858,747	6859,16,12,9	6860,531
6861,21,10,3	6862,1405	6863,956	6864,11,5,2	6865,2494	6866,647	6867,16,4,2	6868,43	6869,17,10,1	6870,27,22,21
6871,1719	6872,25,13,2	6873,2056	6874,2631	6875,22,21,4	6876,287	6877,15,14,2	6878,21,15,5	6879,9,6,2	6880,31,30,19
6881,152	6882,1883	6883,32,26,25	6884,383	6885,22,21,12	6886,565	6887,495	6888,24,11,9	6889,652	6890,16,15,8
6891,30,15,10	6892,421	6893,20,12,6	6894,12,9,8	6895,256	6896,29,17,11	6897,27,18,8	6898,439	6899,6,5,2	6900,915
6901,6,4,1	6902,645	6903,2981	6904,36,13,11	6905,2513	6906,1667	6907,23,12,2	6908,1613	6909,36,35,8	6910,1953
6911,1031	6912,25,15,12	6913,414	6914,16,11,4	6915,18,15,7	6916,13,4,1	6917,22,13,8	6918,1653	6919,15,14,2	6920,8,3,1
6921,1046	6922,25,15,13	6923,17,9,2	6924,93	6925,24,9,7	6926,29,9,3	6927,653	6928,8,7,5	6929,3216	6930,699
6931,21,14,13	6932,6267	6933,35,26,4	6934,15,10,9	6935,678	6936,37,31,30	6937,582	6938,963	6939,16,12,6	6940,399
6941,27,12,11	6942,1949	6943,211	6944,23,21,8	6945,17,3,2	6946,23,16,14	6947,25,19,18	6948,63	6949,16,5,2	6950,11,9,3
6951,434	6952,32,21,19	6953,1820	6954,735	6955,13,7,4	6956,1727	6957,24,10,3	6958,2113	6959,1070	6960,14,9,3
6961,570	6962,16,11,1	6963,24,20,6	6964,13	6965,18,8,7	6966,249	6967,2269	6968,35,32,17	6969,1073	6970,1867
6971,28,20,6	6972,455	6973,36,34,14	6974,369	6975,992	6976,19,18,9	6977,285	6978,23,18,3	6979,11,8,6	6980,485
6981,17,16,11	6982,21,16,8	6983,168	6984,8,3,2	6985,439	6986,579	6987,21,6,4	6988,445	6989,15,12,2	6990,1673
6991,510	6992,27,11,9	6993,166	6994,28,12,3	6995,25,12,4	6996,1025	6997,27,17,4	6998,1241	6999,623	7000,27,26,11
7001,1631	7002,3375	7003,16,6,5	7004,291	7005,14,11,4	7006,981	7007,914	7008,33,25,6	7009,1932	7010,14,13,6
7011,5,2,1	7012,273	7013,8,5,2	7014,633	7015,1483	7016,23,10,7	7017,175	7018,1695	7019,33,14,13	7020,117
7021,23,6,4	7022,1337	7023,242	7024,22,15,10	7025,1701	7026,195	7027,20,9,2	7028,25,16,2	7029,29,23,16	7030,793
7031,1029	7032,19,13,9	7033,16	7034,2679	7035,29,9,8	7036,1353	7037,26,24,20	7038,29,2691	7039,669	7040,19,18,7
7041,587	7042,2871	7043,15,12,6	7044,23	7045,19,6,3	7046,1961	7047,238	7048,39,17,4	7049,794	7050,1379
7051,7,6,3	7052,3471	7053,13,6,1	7054,17,11,1	7055,803	7056,27,24,10	7057,937	7058,1103	7059,31,17,4	7060,765
7061,24,23,1	7062,2597	7063,265	7064,11,5,2	7065,599	7066,21,14,11	7067,19,11,10	7068,549	7069,28,17,14	7070,1217
7071,137	7072,37,26,17	7073,2202	7074,259	7075,31,26,20	7076,677	7077,674	7078,11,10,2	7079,351	7080,27,18,16
7081,333	7082,423	7083,26,22,2	7084,345	7085,20,15,14	7086,22,6,3	7087,1245	7088,32,5,2	7089,2519	7090,21,15,1
7091,9,7,4	7092,1929	7093,22,18,2	7094,23,13,12	7095,67	7096,27,17,13	7097,936	7098,2695	7099,16,4,1	7100,921
7101,8,7,1	7102,28,21,8	7103,63	7104,15,10,4	7105,1954	7106,3123	7107,8,2,1	7108,235	7109,26,21,8	7110,41
7111,1665	7112,35,5,2	7113,1618	7114,13,12,3	7115,					

7201,153	7202,1631	7203,686	7204,1695	7205,21,5,2	7206,2349	7207,246	7208,29,23,21	7209,460	7210,3111
7211,29,8,6	7212,29,26,4	7213,25,15,8	7214,28,7,2	7215,19	7216,15,8,1	7217,891	7218,3263	7219,23,6,5	7220,2975
7221,13,12,10	7222,2733	7223,245	7224,15,12,10	7225,333	7226,2807	7227,29,22,7	7228,1165	7229,19,4,2	7230,2421
7231,2185	7232,35,12,9	7233,1435	7234,29,22,18	7235,19,18,7	7236,75	7237,21,10,2	7238,19,14,6	7239,1610	7240,33,14,2
7241,308	7242,87	7243,25,10,1	7244,497	7245,26,23,9	7246,2505	7247,726	7248,17,7,4	7249,274	7250,2427
7251,19,14,13	7252,1885	7253,32,13,7	7254,933	7255,283	7256,22,21,7	7257,3472	7258,2731	7259,38,19,1	7260,121
7261,28,3,2	7262,32,13,12	7263,256	7264,41,36,19	7265,776	7266,139	7267,32,17,6	7268,14,4,3	7269,33,32,30	7270,829
7271,1325	7272,23,10,4	7273,789	7274,38,31,18	7275,8,2,1	7276,1621	7277,24,23,7	7278,1741	7279,3247	7280,37,6,4
7281,179	7282,26,8,7	7283,34,22,12	7284,625	7285,29,18,5	7286,1793	7287,1349	7288,25,23,17	7289,1253	7290,1431
7291,29,24,1	7292,3033	7293,34,14,8	7294,22,13,10	7295,1961	7296,37,7,2	7297,570	7298,15,13,11	7299,26,11,3	7300,925
7301,23,22,7	7302,1521	7303,3280	7304,37,30,17	7305,602	7306,7	7307,19,15,2	7308,287	7309,23,15,2	7310,3557
7311,341	7312,25,24,3	7313,45	7314,2787	7315,25,10,4	7316,1415	7317,20,19,4	7318,2625	7319,330	7320,35,28,10
7321,202	7322,1587	7323,26,11,2	7324,523	7325,35,29,6	7326,381	7327,2947	7328,41,30,26	7329,70	7330,11,10,9
7331,28,19,6	7332,643	7333,26,21,5	7334,237	7335,1421	7336,34,21,5	7337,828	7338,1351	7339,14,5,1	7340,311
7341,29,5,2	7342,577	7343,170	7344,33,28,3	7345,1344	7346,671	7347,27,26,2	7348,2863	7349,12,6,2	7350,573
7351,601	7352,20,5,3	7353,410	7354,2443	7355,27,26,7	7356,1179	7357,30,16,8	7358,20,15,6	7359,2864	7360,23,18,2
7361,155	7362,355	7363,34,24,19	7364,377	7365,26,20,5	7366,397	7367,213	7368,19,13,11	7369,1041	7370,1683
7371,28,16,9	7372,1429	7373,11,8,6	7374,829	7375,172	7376,41,22,16	7377,407	7378,523	7379,22,8,4	7380,105
7381,32,10,2	7382,2537	7383,20	7384,31,26,9	7385,912	7386,751	7387,23,20,10	7388,629	7389,22,17,13	7390,13,12,10
7391,35	7392,33,27,21	7393,1407	7394,1127	7395,8,4,2	7396,29,16,2	7397,28,26,21	7398,145	7399,2715	7400,19,9,5
7401,1814	7402,871	7403,30,20,14	7404,297	7405,17,14,6	7406,27,20,1	7407,27,21,17	7408,13,3,1	7409,854	7410,2179
7411,24,18,16	7412,1797	7413,17,6,2	7414,13,12,2	7415,10,9,5	7416,35,23,9	7417,634	7418,867	7419,32,29,2	7420,26,25,5
7421,26,14,2	7422,2961	7423,285	7424,18,13,7	7425,371	7426,1371	7427,30,17,1	7428,343	7429,30,10,4	7430,11,9,6
7431,65	7432,30,19,7	7433,420	7434,2295	7435,13,5,2	7436,315	7437,31,20,19	7438,3285	7439,2505	7440,22,21,15
7441,1053	7442,10,6,5	7443,23,12,6	7444,679	7445,12,5,2	7446,1217	7447,1	7448,21,20,14	7449,625	7450,379
7451,16,14,9	7452,1701	7453,30,29,7	7454,24,13,5	7455,284	7456,27,8,1	7457,12,9,2	7458,3127	7459,40,32,14	7460,1535
7461,20,19,7	7462,345	7463,2939	7464,21,18,14	7465,277	7466,2087	7467,25,20,4	7468,789	7469,30,26,22	7470,17,8,3
7471,400	7472,23,13,7	7473,457	7474,23,17,15	7475,24,10,8	7476,423	7477,23,16,2	7478,1797	7479,1069	7480,32,15,2
7481,887	7482,18,4,3	7483,25,18,2	7484,3305	7485,26,8,1	7486,22,19,16	7487,2940	7488,21,16,6	7489,2644	7490,2843
7491,10,9,7	7492,1015	7493,20,10,3	7494,20,9,8	7495,241	7496,23,21,12	7497,49	7498,33,15,12	7499,27,14,9	7500,125
7501,21,13,2	7502,20,17,8	7503,628	7504,45,17,2	7505,1451	7506,135	7507,34,14,9	7508,3503	7509,21,10,4	7510,26,7,2
7511,51	7512,22,21,3	7513,2697	7514,38,21,5	7515,18,17,11	7516,27,25,18	7517,20,19,10	7518,3653	7519,15	7520,19,9,7
7521,1501	7522,2331	7523,35,22,1	7524,75	7525,17,11,4	7526,533	7527,1507	7528,18,13,1	7529,953	7530,307
7531,13,10,3	7532,705	7533,11,8,7	7534,2349	7535,2726	7536,42,21,14	7537,1377	7538,735	7539,26,19,10	7540,2127
7541,28,10,2	7542,549	7543,1173	7544,23,13,7	7545,1679	7546,15,8,5	7547,24,22,11	7548,1689	7549,22,16,12	7550,27,26,9
7551,145	7552,17,8,3	7553,492	7554,12,11,6	7555,26,13,2	7556,2835	7557,18,16,12	7558,1501	7559,185	7560,41,21,3
7561,846	7562,1547	7563,29,8,7	7564,1845	7565,24,22,13	7566,209	7567,151	7568,15,5,3	7569,3409	7570,3303
7571,16,14,7	7572,2413	7573,12,7,6	7574,197	7575,2174	7576,41,40,11	7577,846	7578,423	7579,14,11,3	7580,761
7581,23,21,14	7582,13,6,2	7583,653	7584,51,46,10	7585,268	7586,3251	7587,15,9,4	7588,655	7589,15,10,7	7590,869
7591,1236	7592,45,10,1	7593,1210	7594,3471	7595,34,32,13	7596,55	7597,32,11,7	7598,1469	7599,2066	7600,19,18,2
7601,2555	7602,555	7603,6,5,2	7604,1257	7605,28,15,3	7606,24,9,7	7607,111	7608,39,25,10	7609,495	7610,18,11,2
7611,32,27,6	7612,1671	7613,25,8,6	7614,945	7615,19,13,7	7616,31,21,14	7617,18,5,3	7618,22,17,6	7619,29,18,6	7620,203
7621,32,29,19	7622,581	7623,637	7624,9,2,1	7625,474	7626,291	7627,40,15,2	7628,3773	7629,35,10,7	7630,2833
7631,92	7632,54,3,2	7633,24,14,7	7634,2963	7635,27,11,2	7636,733	7637,13,10,8	7638,2673	7639,3729	7640,29,3,2
7641,925	7642,663	7643,16,5,1	7644,161	7645,28,15,10	7646,1233	7647,1105	7648,37,33,10	7649,2222	7650,199
7651,24,16,13	7652,2165	7653,21,14,11	7654,20,14,1	7655,3629	7656,30,13,7	7657,1069	7658,3627	7659,17,13,10	7660,2287
7661,30,20,4	7662,2473	7663,1203	7664,30,23,5	7665,97	7666,1351	7667,27,26,7	7668,77	7669,30,6,3	7670,13,11,4
7671,769	7672,39,5,1	7673,120	7674,1891	7675,9,6,1	7676,21,14,11	7677,38,25,11	7678,2325	7679,1497	7680,27,9,3
7681,1500	7682,479	7683,23,14,7	7684,1419	7685,10,9,8	7686,581	7687,867	7688,35,16,6	7689,728	7690,23,19,11
7691,36,29,2	7692,1683	7693,30,9,4	7694,2685	7695,119	7696,17,16,15	7697,282	7698,111	7699,10,6,3	7700,177
7701,20,14,8	7702,541	7703,2786	7704,15,12,10	7705,1962	7706,831	7707,19,18,15	7708,13	7709,18,4,2	7710,3853
7711,3084	7712,27,22,5	7713,1060	7714,367	7715,22,16,14	7716,1157	7717,7,6,1	7718,11,5,3	7719,1993	7720,27,25,4
7721,1382	7722,15	7723,30,21,9	7724,1967	7725,23,22,17	7726,30,23,7	7727,1007	7728,21,6,3	7729,594	7730,1979
7731,11,10,1	7732,49	7733,15,8,3	7734,2089	7735,717	7736,22,11,3	7737,13,15,1	7738,3499	7739,48,33,29	7740,47
7741,32,22,11	7742,377	7743,3007	7744,33,28,27	7745,1364	7746,22,19,10	7747,28,26,12	7748,1155	7749,28,25,2	7750,721
7751,273	7752,35,30,2	7753,1459	7754,31,7,5	7755,16,7,2	7756,29,6,4	7757,17,10,7	7758,1633	7759,42	7760,32,23,21
7761,2074	7762,231	7763,14,10,6	7764,499	7765,18,17,1	7766,1341	7767,410	7768,27,18,15	7769,2933	7770,1943
7771,38,35,27	7772,2879	7773,30,19,18	7774,3585	7775,243	7776,41,39,36	7777,150	7778,24,23,3	7779,40,22,14	7780,325
7781,24,22,5	7782,25,17,1	7783,118	7784,7,4,2	7785,818	7786,16,15,9	7787,26,18,7	7788,435	7789,17,13,2	7790,1533
7791,749	7792,47,31,29	7793,233	7794,675	7795,38,33,8	7796,1841	7797,14,10,1	7798,29,22,3	7799,137	7800,11,10,5
7801,558	7802,2103	7803,19,14,2	7804,9,8,2	7805,23,14,5	7806,17,12,6	7807,1533	7808,25,24,10	7809,2233	7810,699
7811,34,23,18	7812,413	7813,38,30,28	7814,2121	7815,994	7816,20,3,2	7817,47	7818,1291	7819,8,5,3	7820,35
7821,14,10,8	7822,2929	7823,458	7824,39,36,14	7825,966	7826,3483	7827,31,28,6	7828,163	7829,15,14,8	7830,1281
7831,825	7832,37,19,3	7833,613	7834,16,15,9	7835,28,20,10	7836,23,20,7	7837,30,23,1	7838,3789	7839,374	7840,33,29,23
7841,2829	7842,29,10,4	7843,16,9,6	7844,23,10,7	7845,32,31,7	7846,23,22,2	7847,270	7848,34,31,21	7849,967	7850,3591
7851,28,13,5	7852,2235	7853,30,28,26	7854,213	7855,1087	7856,12,3,2	7857,215	7858,3643	7859,22,3,2	7860,2505
7861,20,16,2	7862,17,13,10	7863,1568	7864,19,13,1	7865,654	7866,79	7867,40,35,21	7868,1227	7869,17,6,2	7870,981
7871,2462	7872,27,22,18	7873,154	7874,855	7875,28,21,13	7876,3165	7877,18,7,4	7878,129	7879,24,19,8	7880,25,19,17
7881,26,9,6	7882,17,15,10	7883,17,16,6	7884,215	7885,35,30,13	7886,25,15,13	7887,664	7888,12,9,7	7889,2400	7890,531
7891,18,5,1	7892,1113	7893,20,5,2	7894,21,16,13	7895,197	7896,45,39,7	7897,940	7898,29,8,2	7899,11,10,2	7900,1681
7901,17,13,10	7902,2729	7903,612	7904,45,34,25	7905,1612	7906,15,11,1	7907,20,10,6	7908,1333	7909,20,2,1	7910,221
791									

8001,127	8002,12,4,3	8003,26,21,2	8004,3087	8005,18,16,11	8006,2201	8007,554	8008,23,22,17	8009,3159	8010,687
8011,20,16,5	8012,1541	8013,28,26,20	8014,1753	8015,776	8016,31,30,25	8017,141	8018,18,15,9	8019,39,33,16	8020,1713
8021,32,18,3	8022,917	8023,16,11,9	8024,21,14,11	8025,229	8026,1843	8027,11,10,9	8028,279	8029,33,19,16	8030,53
8031,13,12,3	8032,19,15,13	8033,2240	8034,695	8035,30,24,4	8036,131	8037,34,33,30	8038,13,9,8	8039,98	8040,39,13,7
8041,1305	8042,15,8,5	8043,25,17,16	8044,3627	8045,18,8,3	8046,1389	8047,1444	8048,30,23,3	8049,1009	8050,31,12,11
8051,24,15,5	8052,11,9,2	8053,20,19,12	8054,1025	8055,1069	8056,27,16,5	8057,960	8058,1115	8059,34,21,6	8060,297
8061,10,7,2	8062,2449	8063,273	8064,27,23,9	8065,253	8066,32,27,15	8067,42,29,17	8068,1603	8069,15,14,4	8070,413
8071,358	8072,23,11,6	8073,883	8074,28,26,3	8075,29,24,16	8076,1731	8077,30,27,18	8078,669	8079,1523	8080,39,14,11
8081,768	8082,239	8083,31,17,6	8084,2519	8085,31,22,13	8086,1597	8087,989	8088,25,10,8	8089,967	8090,3759
8091,16,9,1	8092,351	8093,20,5,3	8094,2889	8095,907	8096,32,11,2	8097,2513	8098,2667	8099,28,25,23	8100,9
8101,15,6,4	8102,31,2,1	8103,2333	8104,30,23,17	8105,1611	8106,771	8107,25,16,1	8108,627	8109,15,9,4	8110,217
8111,1130	8112,15,12,2	8113,3058	8114,1667	8115,20,17,5	8116,1057	8117,32,15,14	8118,21,15,1	8119,10	8120,8,3,2
8121,3494	8122,19,12,4	8123,47,22,18	8124,269	8125,26,18,10	8126,28,25,15	8127,218	8128,25,24,19	8129,548	8130,719
8131,25,7,6	8132,9,5,4	8133,30,19,18	8134,25	8135,468	8136,11,3,2	8137,739	8138,1043	8139,24,12,10	8140,1683
8141,32,8,6	8142,29,28,20	8143,1890	8144,28,27,17	8145,728	8146,1911	8147,22,8,1	8148,133	8149,18,8,4	8150,89
8151,3841	8152,29,25,14	8153,1020	8154,995	8155,18,10,5	8156,3641	8157,19,16,14	8158,23,17,7	8159,1026	8160,52,45,10
8161,292	8162,1391	8163,29,28,25	8164,471	8165,29,26,9	8166,381	8167,2553	8168,25,16,6	8169,481	8170,17,6,5
8171,21,17,8	8172,539	8173,11,8,7	8174,21,9,8	8175,661	8176,43,32,21	8177,905	8178,2611	8179,24,21,13	8180,185
8181,9,6,4	8182,1477	8183,1139	8184,32,27,6	8185,777	8186,10,7,3	8187,29,22,16	8188,1155	8189,41,10,4	8190,1869
8191,714	8192,9,5,2	8193,1055	8194,3847	8195,15,14,4	8196,2477	8197,21,8,2	8198,657	8199,2758	8200,18,15,3
8201,365	8202,15,12,11	8203,33,28,23	8204,1727	8205,21,18,13	8206,16,14,9	8207,5	8208,19,13,11	8209,943	8210,3507
8211,34,18,13	8212,1773	8213,24,10,4	8214,21,16,3	8215,469	8216,27,24,17	8217,94	8218,1443	8219,29,27,10	8220,327
8221,24,22,11	8222,2345	8223,308	8224,39,36,25	8225,2588	8226,447	8227,25,18,12	8228,23,18,6	8229,36,29,3	8230,2149
8231,3564	8232,22,15,9	8233,1407	8234,215	8235,38,36,21	8236,351	8237,23,18,11	8238,15,5,3	8239,1462	8240,14,13,7
8241,1694	8242,36,35,2	8243,35,14,2	8244,343	8245,18,16,14	8246,173	8247,2050	8248,25,15,13	8249,20,11,9	8250,3399
8251,13,10,3	8252,2861	8253,9,5,2	8254,3157	8255,1496	8256,32,21,14	8257,1530	8258,1407	8259,21,15,4	8260,225
8261,20,17,14	8262,693	8263,2232	8264,15,6,3	8265,161	8266,12,7,6	8267,21,16,2	8268,477	8269,24,13,2	8270,21,17,4
8271,44	8272,32,25,23	8273,3500	8274,419	8275,35,10,9	8276,915	8277,30,8,3	8278,193	8279,2439	8280,30,19,9
8281,226	8282,351	8283,25,23,4	8284,2197	8285,47,42,24	8286,3957	8287,1755	8288,27,5,4	8289,98	8290,43,24,14
8291,28,26,19	8292,637	8293,14,12,8	8294,21,12,11	8295,938	8296,37,19,6	8297,2846	8298,21,14,11	8299,29,28,8	8300,185
8301,27,13,10	8302,1305	8303,3789	8304,32,17,15	8305,417	8306,17,12,9	8307,19,17,10,17	8308,16,9,8	8309,28,26,10	8310,3333
8311,1470	8312,45,44,30	8313,4117	8314,18,15,9	8315,20,15,2	8316,405	8317,30,28,19	8318,21,16,10	8319,458	8320,41,39,5
8321,2985	8322,7,5,2	8323,35,12,10	8324,1149	8325,31,14,10	8326,14,5,4	8327,596	8328,37,23,14	8329,775	8330,1107
8331,37,34,10	8332,651	8333,26,18,14	8334,3285	8335,129	8336,33,10,2	8337,643	8338,16,15,7	8339,13,12,7	8340,553
8341,50,48,19	8342,2921	8343,1667	8344,27,15,1	8345,777	8346,26,25,10	8347,29,7,6	8348,1737	8349,29,22,7	8350,3177
8351,170	8352,35,18,14	8353,2548	8354,1515	8355,18,6,5	8356,22,18,13	8357,22,12,5	8358,677	8359,1905	8360,15,14,5
8361,24,20,8	8362,655	8363,20,3,2	8364,2443	8365,22,12,4	8366,2381	8367,154	8368,35,17,4	8369,29,15,1	8370,1643
8371,13,8,2	8372,17	8373,14,5,2	8374,4125	8375,2316	8376,45,39,17	8377,2035	8378,3851	8379,26,15,8	8380,1815
8381,22,15,5	8382,32,22,13	8383,23,13,8	8384,19,4,2	8385,2369	8386,907	8387,14,12,3	8388,691	8389,39,16,13	8390,3797
8391,1336	8392,17,11,1	8393,312	8394,30,10,3	8395,18,12,4	8396,17,14,11	8397,25,6,1	8398,3481	8399,4191	8400,29,28,11
8401,1105	8402,287	8403,22,6,1	8404,805	8405,32,22,16	8406,30,9,1	8407,1557	8408,20,9,2	8409,2506	8410,33,17,5
8411,30,27,5	8412,1049	8413,26,25,24	8414,3197	8415,1061	8416,40,33,22	8417,2240	8418,2187	8419,15,10,1	8420,2751
8421,27,26,20	8422,33,22,9	8423,168	8424,33,31,28	8425,3	8426,1539	8427,14,13,8	8428,129	8429,35,14,6	8430,361
8431,97	8432,17,15,13	8433,1255	8434,1459	8435,33,28,26	8436,401	8437,34,27,15	8438,17,10,7	8439,43	8440,18,9,6
8441,992	8442,1863	8443,16,12,6	8444,905	8445,38,6,5	8446,3201	8447,213	8448,21,17,6	8449,25	8450,38,36,7
8451,13,5,2	8452,11,8,6	8453,14,11,5	8454,21,6,4	8455,412	8456,15,13,8	8457,230	8458,19,10,6	8459,10,9,7	8460,127
8461,24,22,14	8462,33,32,31	8463,397	8464,34,15,5	8465,936	8466,451	8467,31,24,21	8468,15,11,3	8469,26,14,13	8470,1713
8471,827	8472,30,21,5	8473,2398	8474,37,6,1	8475,6,4,1	8476,85	8477,46,34,26	8478,405	8479,1425	8480,21,6,3
8481,641	8482,331	8483,26,19,10	8484,1421	8485,23,10,5	8486,22,21,19	8487,4112	8488,13,6,3	8489,3096	8490,26,16,13
8491,35,32,25	8492,497	8493,33,26,23	8494,10,7,4	8495,122	8496,25,19,3	8497,540	8498,15,14,11	8499,28,18,15	8500,753
8501,37,36,31	8502,3157	8503,91	8504,35,24,10	8505,109	8506,3555	8507,31,6,5	8508,1207	8509,19,16,15	8510,2709
8511,4177	8512,33,27,4	8513,3044	8514,19,14,8	8515,27,10,7	8516,1221	8517,14,8,5	8518,721	8519,36	8520,28,15,13
8521,2646	8522,3603	8523,21,18,5	8524,1575	8525,36,19,2	8526,637	8527,435	8528,15,4,2	8529,2296	8530,2019
8531,18,2,1	8532,787	8533,23,20,4	8534,27,7,1	8535,2996	8536,19,10,3	8537,242	8538,20,11,4	8539,12,9,4	8540,465
8541,26,9,5	8542,30,28,9	8543,969	8544,31,5,2	8545,1944	8546,19,11,10	8547,21,13,10	8548,519	8549,41,23,6	8550,893
8551,639	8552,29,10,1	8553,4171	8554,33,17,7	8555,14,13,7	8556,2011	8557,30,23,17	8558,4193	8559,2161	8560,21,13,3
8561,15,5,1	8562,939	8563,13,5,2	8564,801	8565,33,14,11	8566,2581	8567,24,16,11	8568,28,25,10	8569,1429	8570,37,10,3
8571,12,8,2	8572,1081	8573,22,14,4	8574,22,13,2	8575,457	8576,19,9,1	8577,439	8578,30,7,4	8579,13,11,6	8580,143
8581,8,7,3	8582,1817	8583,3448	8584,32,15,13	8585,137	8586,407	8587,34,8,2	8588,29	8589,15,12,10	8590,27,23,17
8591,431	8592,23,5,4	8593,94	8594,21,20,5	8595,17,13,10	8596,13,7,6	8597,33,27,26	8598,23,14,1	8599,2385	8600,21,14,3
8601,734	8602,1431	8603,16,9,1	8604,1381	8605,30,23,7	8606,19,17,7	8607,203	8608,47,44,33	8609,434	8610,21,17,14
8611,25,18,1	8612,287	8613,24,15,14	8614,1585	8615,3713	8616,22,19,11	8617,1150	8618,1947	8619,29,28,5	8620,1197
8621,22,10,2	8622,33,24,19	8623,1483	8624,4,3,2	8625,256	8626,103	8627,38,15,11	8628,25,24,7	8629,33,16,11	8630,20,6,3
8631,857	8632,41,32,3	8633,3234	8634,19,14,8	8635,23,14,13	8636,2345	8637,20,13,7	8638,3961	8639,441	8640,23,20,4
8641,81	8642,15,11,6	8643,26,18,2	8644,103	8645,17,14,12	8646,4293	8647,145	8648,31,17,6	8649,280	8650,783
8651,26,11,3	8652,833	8653,26,18,10	8654,2529	8655,2863	8656,39,14,4	8657,884	8658,3323	8659,14,9,4	8660,1157
8661,30,7,1	8662,31,22,18	8663,2306	8664,29,19,11	8665,2416	8666,2111	8667,22,21,18	8668,1839	8669,20,12,3	8670,1061
8671,1329	8672,29,23,12	8673,28	8674,3403	8675,18,17,10	8676,927	8677,13,11,6	8678,25,19,15	8679,1370	8680,32,7,2
8681,1175	8682,947	8683,19,18,11	8684,3815	8685,31,9,6	8686,2653	8687,21,18,3	8688,25,20,7	8689,855	8690,24,14,11
8691,40,17,5	8692,1095	8693,32,24,15	8694,1809	8695,2283	8696,25,20,6	8697,164	8698,2583	8699,26,20,3	8700,1295
8701,33,5,2	8702,24,17								

8801,309	8802,2139	8803,31,21,4	8804,549	8805,42,16,9	8806,1773	8807,3569	8808,15,9,6	8809,1089	8810,24,17,7
8811,22,8,2	8812,2295	8813,37,4,2	8814,1497	8815,1174	8816,17,8,6	8817,1654	8818,29,11,9	8819,15,13,4	8820,147
8821,28,24,23	8822,32,28,25	8823,1028	8824,19,14,6	8825,303	8826,4275	8827,30,17,10	8828,1133	8829,15,9,8	8830,3889
8831,891	8832,15,9,6	8833,328	8834,683	8835,20,16,5	8836,1171	8837,20,10,6	8838,1653	8839,285	8840,33,22,16
8841,539	8842,4143	8843,33,20,17	8844,355	8845,31,24,2	8846,21,20,12	8847,1100	8848,33,4,3	8849,2324	8850,1191
8851,33,14,4	8852,1697	8853,23,17,16	8854,12,5,1	8855,138	8856,14,5,2	8857,2493	8858,29,23,17	8859,35,30,27	8860,3577
8861,18,16,10	8862,49	8863,1099	8864,37,12,7	8865,2713	8866,29,16,5	8867,32,9,5	8868,623	8869,34,19,7	8870,1029
8871,2422	8872,51,4,2	8873,689	8874,2239	8875,19,18,1	8876,381	8877,21,13,10	8878,3949	8879,2369	8880,36,9,6
8881,990	8882,17,11,6	8883,28,27,10	8884,2121	8885,30,26,20	8886,469	8887,1107	8888,43,13,9	8889,1216	8890,2007
8891,10,9,4	8892,249	8893,27,7,6	8894,17,6,5	8895,958	8896,41,10,6	8897,1439	8898,287	8899,29,2,1	8900,2285
8901,17,12,2	8902,10,9,2	8903,222	8904,40,25,10	8905,433	8906,35,16,13	8907,22,21,16	8908,3031	8909,22,17,9	8910,1749
8911,963	8912,18,17,1	8913,158	8914,16,4,3	8915,11,6,5	8916,2259	8917,28,21,3	8918,16,10,9	8919,2479	8920,33,32,31
8921,6	8922,787	8923,11,8,6	8924,797	8925,22,11,7	8926,853	8927,1425	8928,35,29,2	8929,358	8930,83
8931,17,6,5	8932,507	8933,24,10,4	8934,1125	8935,861	8936,17,3,1	8937,3733	8938,2295	8939,22,21,14	8940,529
8941,36,35,31	8942,21,16,13	8943,3635	8944,39,34,1	8945,563	8946,967	8947,28,20,6	8948,2637	8949,29,22,13	8950,9,5,1
8951,506	8952,27,14,2	8953,25	8954,25,23,1	8955,18,13,1	8956,4231	8957,16,10,3	8958,1029	8959,225	8960,12,7,5
8961,176	8962,691	8963,30,26,10	8964,939	8965,30,7,5	8966,1233	8967,2744	8968,29,11,10	8969,435	8970,2191
8971,23,5,4	8972,1619	8973,24,19,12	8974,981	8975,1128	8976,23,8,2	8977,966	8978,18,17,5	8979,29,22,16	8980,3093
8981,22,2,1	8982,169	8983,345	8984,9,8,6	8985,2674	8986,495	8987,16,12,10	8988,1513	8989,15,7,2	8990,333
8991,2020	8992,35,6,2	8993,2079	8994,1051	8995,19,16,13	8996,25,16,12	8997,33,22,1	8998,23,10,2	8999,1386	9000,28,19,17
9001,1599	9002,3995	9003,37,20,10	9004,649	9005,19,14,4	9006,1477	9007,222	9008,31,17,7	9009,29	9010,17,12,1
9011,31,14,10	9012,1053	9013,32,9,7	9014,1217	9015,12,3,1	9016,23,21,8	9017,155	9018,1327	9019,26,22,15	9020,287
9021,28,22,10	9022,861	9023,4350	9024,32,29,11	9025,744	9026,35	9027,23,14,3	9028,2935	9029,36,26,1	9030,32,8,1
9031,714	9032,45,19,1	9033,1615	9034,2095	9035,30,22,5	9036,449	9037,28,14,5	9038,21,9,8	9039,1741	9040,9,6,4
9041,813	9042,103	9043,27,26,23	9044,2819	9045,33,8,6	9046,36,30,15	9047,287	9048,23,16,10	9049,2490	9050,1319
9051,17,10,7	9052,2725	9053,21,15,12	9054,609	9055,946	9056,11,3,2	9057,2345	9058,235	9059,24,15,6	9060,151
9061,26,18,7	9062,3292	9063,2320	9064,33,4,2	9065,2022	9066,15,6,1	9067,9,2,1	9068,2565	9069,36,31,12	9070,23,13,3
9071,2276	9072,45,38,6	9073,20,16,5	9074,207	9075,30,17,15	9076,2395	9077,16,6,4	9078,2681	9079,2179	9080,17,10,7
9081,190	9082,19,17,14	9083,31,18,5	9084,1699	9085,26,13,5	9086,2445	9087,23,19,7	9088,33,31,1	9089,440	9090,18,7,3
9091,20,9,7	9092,29	9093,11,8,4	9094,2769	9095,2546	9096,27,26,11	9097,1260	9098,25,15,14	9099,16,9,1	9100,55
9101,14,8,6	9102,15,14,2	9103,4200	9104,47,33,24	9105,1493	9106,1723	9107,28,13,6	9108,575	9109,9,5,2	9110,32,17,8
9111,487	9112,9,7,5	9113,3563	9114,539	9115,30,9,7	9116,1841	9117,18,16,7	9118,21,11,10	9119,917	9120,35,25,5
9121,249	9122,47,29,23	9123,15,13,10	9124,23,17,12	9125,26,12,10	9126,181	9127,1120	9128,39,25,22	9129,23	9130,2991
9131,7,5,4	9132,207	9133,26,9,4	9134,1545	9135,944	9136,21,14,1	9137,2163	9138,2671	9139,10,3,1	9140,1365
9141,36,7,1	9142,4545	9143,1268	9144,35,25,4	9145,546	9146,12,2,1	9147,31,16,2	9148,1921	9149,30,28,7	9150,469
9151,1330	9152,33,29,7	9153,682	9154,3087	9155,25,11,6	9156,281	9157,30,10,7	9158,809	9159,3470	9160,22,15,3
9161,1046	9162,2807	9163,20,7,6	9164,1913	9165,13,12,3	9166,19,10,3	9167,12,3,2	9168,15,10,4	9169,229	9170,1103
9171,38,5,4	9172,33,26,8	9173,31,17,12	9174,29,23,8	9175,2806	9176,43,37,30	9177,884	9178,19,17,8	9179,10,6,5	9180,1153
9181,23,13,6	9182,1769	9183,30,13,1	9184,33,26,14	9185,207	9186,3159	9187,20,18,4	9188,4305	9189,26,14,8	9190,2217
9191,3936	9192,21,18,13	9193,1216	9194,16,10,5	9195,14,13,1	9196,31,12,5	9197,14,12,5	9198,1365	9199,109	9200,31,24,2
9201,146	9202,211	9203,28,20,6	9204,645	9205,14,11,3	9206,4085	9207,397	9208,35,10,9	9209,2181	9210,2603
9211,36,19,17	9212,3839	9213,38,7,5	9214,397	9215,1217	9216,21,14,8	9217,1956	9218,2919	9219,30,6,4	9220,1875
9221,33,26,5	9222,33,23,11	9223,1023	9224,35,21,7	9225,181	9226,4315	9227,38,29,3	9228,145	9229,20,19,17	9230,21,12,8
9231,3899	9232,49,18,8	9233,545	9234,315	9235,23,22,2	9236,22,14,9	9237,18,16,12	9238,49	9239,1629	9240,17,11,7
9241,909	9242,239	9243,5,2,1	9244,441	9245,43,35,18	9246,27,18,3	9247,48	9248,37,18,13	9249,1663	9250,531
9251,8,3,2	9252,327	9253,42,28,10	9254,24,17,13	9255,298	9256,19,6,4	9257,1364	9258,3843	9259,22,16,6	9260,2729
9261,30,18,10	9262,1549	9263,3173	9264,39,17,14	9265,1123	9266,23,14,6	9267,23,8,5	9268,3183	9269,42,18,14	9270,837
9271,1488	9272,13,4,3	9273,502	9274,1219	9275,10,6,2	9276,135	9277,11,3,2	9278,2145	9279,1526	9280,23,7,2
9281,2049	9282,2307	9283,20,7,6	9284,1883	9285,29,6,5	9286,25,20,14	9287,2520	9288,49,43,18	9289,358	9290,1731
9291,8,5,1	9292,3087	9293,20,18,3	9294,3373	9295,2149	9296,29,17,15	9297,1838	9298,2139	9299,22,21,1	9300,135
9301,35,25,18	9302,605	9303,208	9304,27,13,9	9305,3344	9306,675	9307,31,25,4	9308,1559	9309,19,16,10	9310,3141
9311,2657	9312,21,19,16	9313,924	9314,27,23,12	9315,26,21,8	9316,1233	9317,23,20,2	9318,18,6,3	9319,477	9320,55,22,8
9321,2627	9322,4027	9323,18,4,1	9324,665	9325,18,16,1	9326,35,23,20	9327,4165	9328,21,14,8	9329,2910	9330,4263
9331,31,30,2	9332,2081	9333,26,14,8	9334,3141	9335,1176	9336,17,5,3	9337,546	9338,23,8,5	9339,23,14,1	9340,1339
9341,19,18,14	9342,19,10,8	9343,2700	9344,51,44,5	9345,353	9346,18,10,3	9347,16,14,7	9348,19,9,3	9349,25,18,2	9350,1221
9351,56	9352,31,26,15	9353,3221	9354,16,7,4	9355,22,16,4	9356,1773	9357,35,34,2	9358,453	9359,1227	9360,28,23,1
9361,369	9362,23,13,1	9363,26,21,17	9364,3297	9365,21,20,7	9366,2245	9367,3172	9368,38,7,1	9369,116	9370,2311
9371,28,21,17	9372,269	9373,28,10,4	9374,18,9,2	9375,4459	9376,23,5,1	9377,914	9378,1347	9379,14,9,5	9380,561
9381,19,9,6	9382,3297	9383,1124	9384,17,11,6	9385,523	9386,3863	9387,31,30,9	9388,24,7,3	9389,20,7,3	9390,2601
9391,1239	9392,29,24,11	9393,623	9394,3471	9395,17,15,4	9396,369	9397,32,14,7	9398,2769	9399,1295	9400,18,13,1
9401,429	9402,267	9403,30,8,1	9404,2009	9405,18,4,1	9406,28,27,7	9407,260	9408,28,15,6	9409,405	9410,32,11,8
9411,24,22,1	9412,11,9,2	9413,11,10,9	9414,673	9415,1678	9416,19,11,6	9417,218	9418,823	9419,30,19,13	9420,2701
9421,14,9,5	9422,22,10,9	9423,1280	9424,22,9,6	9425,699	9426,21,6,5	9427,23,18,8	9428,21,17,7	9429,21,9,2	9430,37,18,5
9431,3113	9432,52,43,25	9433,42	9434,19,14,12	9435,7,5,4	9436,225	9437,14,12,1	9438,15,13,6	9439,105	9440,25,22,14
9441,479	9442,4611	9443,30,19,2	9444,3513	9445,34,14,12	9446,12,5,3	9447,458	9448,23,21,20	9449,584	9450,1431
9451,13,12,3	9452,18,14,13	9453,32,29,23	9454,4189	9455,2807	9456,35,19,5	9457,4	9458,25,16,6	9459,36,18,13	9460,20,17,1
9461,32,28,6	9462,34,14,5	9463,327	9464,37,18,13	9465,197	9466,23,14,1	9467,27,14,7	9468,1695	9469,28,22,18	9470,2289
9471,1459	9472,45,40,15	9473,656	9474,23,20,7	9475,29,25,2	9476,2583	9477,26,11,7	9478,909	9479,200	9480,18,9,2
9481,4060	9482,19,12,4	9483,20,10,5	9484,853	9485,23,22,9	9486,945	9487,211	9488,25,12,7	9489,2089	9490,999
9491,19,6,5	9492,373	9493,38,22,3	9494,477	9495,23,20,18	9496,29,17,15	9497,2301	9498,41,17,10	9499,29,20,10	9500,1175
9501,29,26,4	9502,621	9503,99	9504,19,15,6	9505,15,10,1	9506,12				

9601,963	9602,21,5,2	9603,19,10,4	9604,13,11,9	9605,37,26,12	9606,15,12,1	9607,262	9608,14,13,1	9609,1526	9610,2883
9611,14,6,5	9612,93	9613,32,16,3	9614,4577	9615,361	9616,25,8,2	9617,1385	9618,16,3,1	9619,29,14,10	9620,557
9621,29,20,11	9622,2145	9623,2429	9624,31,17,7	9625,508	9626,7,6,1	9627,25,19,18	9628,31	9629,16,15,10	9630,37
9631,295	9632,30,23,5	9633,2333	9634,3075	9635,26,21,10	9636,515	9637,21,18,6	9638,21,19,13	9639,700	9640,33,7,3
9641,3287	9642,3591	9643,18,14,11	9644,1671	9645,9,7,6	9646,31,30,17	9647,1227	9648,31,24,21	9649,657	9650,32,18,11
9651,22,14,4	9652,2733	9653,22,15,2	9654,1969	9655,3558	9656,19,16,2	9657,1192	9658,3691	9659,15,14,8	9660,57
9661,22,14,6	9662,22,9,8	9663,446	9664,35,21,1	9665,2763	9666,435	9667,34,22,6	9668,225	9669,29,27,24	9670,35,34,3
9671,1086	9672,17,9,3	9673,3538	9674,759	9675,44,25,23	9676,3367	9677,30,27,12	9678,4277	9679,864	9680,25,6,2
9681,910	9682,3175	9683,46,37,21	9684,2405	9685,17,14,4	9686,2333	9687,2054	9688,20,9,2	9689,84	9690,1503
9691,17,14,1	9692,3381	9693,10,6,3	9694,50,18,17	9695,207	9696,36,27,21	9697,1201	9698,38,27,24	9699,30,6,1	9700,565
9701,23,12,3	9702,1533	9703,13,7,1	9704,7,3,2	9705,1802	9706,22,15,11	9707,26,15,1	9708,1753	9709,16,13,10	9710,30,15,9
9711,917	9712,27,19,17	9713,2933	9714,1227	9715,27,10,6	9716,263	9717,9,6,2	9718,46,29,11	9719,3492	9720,37,4,2
9721,171	9722,12,11,8	9723,32,29,25	9724,30,28,15	9725,14,8,5	9726,29,28,23	9727,760	9728,30,5,2	9729,938	9730,663
9731,16,12,10	9732,3747	9733,22,21,8	9734,4125	9735,2086	9736,15,7,6	9737,275	9738,3663	9739,15,14,2	9740,3015
9741,11,8,1	9742,30,18,15	9743,869	9744,36,9,2	9745,2361	9746,2559	9747,26,8,1	9748,889	9749,20,7,6	9750,833
9751,1093	9752,42,17,3	9753,1078	9754,3891	9755,6,5,1	9756,1701	9757,22,14,6	9758,1557	9759,706	9760,56,49,47
9761,2588	9762,4455	9763,30,18,1	9764,25,13,9	9765,28,17,11	9766,585	9767,1668	9768,41,23,22	9769,1390	9770,1091
9771,29,8,1	9772,741	9773,32,10,6	9774,401	9775,537	9776,24,19,1	9777,773	9778,24,18,15	9779,40,21,20	9780,711
9781,40,28,15	9782,161	9783,88	9784,38,37,9	9785,2036	9786,4147	9787,20,13,9	9788,2007	9789,17,8,2	9790,177
9791,390	9792,27,26,21	9793,339	9794,24,15,6	9795,26,5,4	9796,321	9797,35,32,2	9798,2677	9799,139	9800,42,41,10
9801,284	9802,12,10,3	9803,18,10,2	9804,1165	9805,22,21,18	9806,30,9,8	9807,337	9808,43,32,21	9809,19,15,10	9810,711
9811,41,28,27	9812,31,30,22	9813,26,17,12	9814,1545	9815,27,26,8	9816,46,33,22	9817,4420	9818,30,19,10	9819,18,4,3	9820,105
9821,34,23,18	9822,305	9823,144	9824,13,10,3	9825,2563	9826,22,10,7	9827,13,12,5	9828,207	9829,4,3,1	9830,1541
9831,1159	9832,39,37,25	9833,104	9834,32,25,7	9835,32,29,1	9836,18,13,10	9837,35,16,2	9838,25,19,12	9839,389	9840,49,47,13
9841,1788	9842,35,28,24	9843,18,12,2	9844,565	9845,38,18,11	9846,2349	9847,3537	9848,25,23,10	9849,329	9850,19,16,4
9851,11,6,5	9852,3379	9853,18,11,10	9854,317	9855,803	9856,36,15,1	9857,4386	9858,4235	9859,34,28,1	9860,2997
9861,33,18,16	9862,13,10,3	9863,1809	9864,35,32,21	9865,2604	9866,34,27,14	9867,26,8,2	9868,339	9869,23,8,6	9870,2681
9871,903	9872,13,11,3	9873,3842	9874,4279	9875,19,18,2	9876,183	9877,19,16,15	9878,573	9879,1181	9880,35,28,5
9881,27,7,5	9882,747	9883,35,34,11	9884,389	9885,38,15,3	9886,3673	9887,710	9888,33,6,4	9889,2019	9890,2583
9891,46,38,7	9892,31,4,1	9893,32,28,18	9894,27,7,1	9895,787	9896,39,38,26	9897,430	9898,23,13,5	9899,34,21,13	9900,11
9901,10,4,3	9902,27,19,10	9903,40	9904,21,10,2	9905,219	9906,2027	9907,10,7,1	9908,2699	9909,11,10,7	9910,27,16,15
9911,483	9912,42,35,15	9913,1899	9914,95	9915,29,17,8	9916,4483	9917,32,9,6	9918,381	9919,1185	9920,49,18,14
9921,901	9922,2691	9923,37,33,26	9924,30,29,26	9925,12,9,7	9926,1445	9927,1987	9928,39,38,31	9929,1382	9930,331
9931,34,10,3	9932,2397	9933,23,6,2	9934,34,7,3	9935,2216	9936,22,21,1	9937,451	9938,25,19,9	9939,32,26,17	9940,2059
9941,29,12,10	9942,133	9943,3069	9944,15,14,6	9945,1882	9946,2355	9947,23,17,8	9948,1535	9949,32,24,10	9950,2453
9951,1334	9952,31,30,11	9953,539	9954,343	9955,9,8,5	9956,851	9957,25,11,4	9958,17,14,4	9959,381	9960,30,15,10
9961,2707	9962,20,14,3	9963,34,29,20	9964,2691	9965,34,24,23	9966,1701	9967,4399	9968,36,3,2	9969,295	9970,2587
9971,11,8,5	9972,519	9973,27,24,12	9974,2045	9975,124	9976,21,19,5	9977,2954	9978,1483	9979,26,10,2	9980,707
9981,30,27,22	9982,993	9983,785	9984,27,10,7	9985,1974	9986,1143	9987,14,11,10	9988,3129	9989,21,20,6	9990,573
9991,495	9992,7,4,2	9993,121	9994,29,22,3	9995,41,40,31	9996,1447	9997,26,10,6	9998,4013	9999,2951	10000,19,13,9