Tables of sums of squares of Kronecker products

These tables give the sums of the squares of the Kronecker products of the irreducible representations of S_n described by partitions of n whose third part is 1 or 0. These are related to a problem posed by Luisa Carini (Palermo).

n = 2

$2\{2\}$

sum = 2

n = 3

$3\{3\} + \{21\} + \{1^3\}$

sum = 5

n = 4

$5\{4\} + 2\{31\} + 3\{2^2\} + 2\{21^2\} + \{1^4\}$

sum = 13

n = 5

$7\{5\} + 5\{41\} + 6\{32\} + 5\{31^2\} + 4\{2^21\}$
$+ 3\{21^3\} + \{1^5\}$

sum = 31

n = 6

$10\{6\} + 8\{51\} + 14\{42\} + 10\{41^2\} + 4\{3^2\}$
$+ 13\{321\} + 9\{31^3\} + 7\{2^3\} + 5\{2^21^2\} + 4\{21^4\}$
$+ \{1^6\}$

sum = 85

n = 7

$13\{7\} + 13\{61\} + 23\{52\} + 17\{51^2\} + 16\{43\}$
$+ 32\{421\} + 18\{41^3\} + 16\{3^21\} + 19\{32^2\} + 24\{321^2\}$
$+ 11\{31^4\} + 10\{2^31\} + 9\{2^21^3\} + 4\{21^5\} + \{1^7\}$

sum = 226

n = 8

$17\{8\} + 18\{71\} + 37\{62\} + 26\{61^2\} + 31\{53\}$
$+ 59\{521\} + 32\{51^3\} + 18\{4^2\} + 53\{431\} + 48\{42^2\}$
$+ 59\{421^2\} + 24\{41^4\} + 26\{3^22\} + 37\{3^21^2\} + 42\{32^21\}$
$+ 37\{321^3\} + 12\{31^5\} + 13\{2^4\} + 14\{2^31^2\} + 11\{2^21^4\}$
$+ 4\{21^6\} + \{1^8\}$

sum = 619

n = 9

$21\{9\}$ $+ 25\{81\}$ $+ 52\{72\}$ $+ 37\{71^2\}$ $+ 55\{63\}$
$+ 96\{621\}$ $+ 49\{61^3\}$ $+ 41\{54\}$ $+ 112\{531\}$ $+ 89\{52^2\}$
$+ 115\{521^2\}$ $+ 43\{51^4\}$ $+ 55\{4^21\}$ $+ 96\{432\}$ $+ 116\{431^2\}$
$+ 113\{42^21\}$ $+ 93\{421^3\}$ $+ 28\{41^5\}$ $+ 22\{3^3\}$ $+ 80\{3^221\}$
$+ 55\{3^21^3\}$ $+ 45\{32^3\}$ $+ 71\{32^21^2\}$ $+ 45\{321^4\}$ $+ 13\{31^6\}$
$+ 19\{2^41\}$ $+ 21\{2^31^3\}$ $+ 11\{2^21^5\}$ $+ 4\{21^7\}$ $+ \{1^9\}$

sum = 1623

n = 10

$26\{10\ \}$ $+ 32\{91\}$ $+ 72\{82\}$ $+ 50\{81^2\}$ $+ 82\{73\}$
$+ 141\{721\}$ $+ 71\{71^3\}$ $+ 80\{64\}$ $+ 195\{631\}$ $+ 148\{62^2\}$
$+ 188\{621^2\}$ $+ 68\{61^4\}$ $+ 26\{5^2\}$ $+ 150\{541\}$ $+ 211\{532\}$
$+ 253\{531^2\}$ $+ 225\{52^21\}$ $+ 182\{521^3\}$ $+ 51\{51^5\}$ $+ 116\{4^22\}$
$+ 114\{4^21^2\}$ $+ 81\{43^2\}$ $+ 286\{4321\}$ $+ 186\{431^3\}$ $+ 123\{42^3\}$
$+ 193\{42^21^2\}$ $+ 120\{421^4\}$ $+ 30\{41^6\}$ $+ 75\{3^31\}$ $+ 82\{3^22^2\}$
$+ 148\{3^221^2\}$ $+ 68\{3^21^4\}$ $+ 94\{32^31\}$ $+ 99\{32^21^3\}$ $+ 50\{321^5\}$
$+ 13\{31^7\}$ $+ 19\{2^5\}$ $+ 26\{2^41^2\}$ $+ 24\{2^31^4\}$ $+ 11\{2^21^6\}$
$+ 4\{21^8\}$ $+ \{1^{10}\ \}$

sum = 4214

n = 11

$31\{11\ \}$ $+ 41\{10\ 1\}$ $+ 93\{92\}$ $+ 65\{91^2\}$ $+ 118\{83\}$
$+ 196\{821\}$ $+ 96\{81^3\}$ $+ 125\{74\}$ $+ 300\{731\}$ $+ 219\{72^2\}$
$+ 282\{721^2\}$ $+ 99\{71^4\}$ $+ 75\{65\}$ $+ 294\{641\}$ $+ 380\{632\}$
$+ 439\{631^2\}$ $+ 382\{62^21\}$ $+ 302\{621^3\}$ $+ 83\{61^5\}$ $+ 118\{5^21\}$
$+ 325\{542\}$ $+ 341\{541^2\}$ $+ 194\{53^2\}$ $+ 648\{5321\}$ $+ 411\{531^3\}$
$+ 244\{52^3\}$ $+ 398\{52^21^2\}$ $+ 238\{521^4\}$ $+ 57\{51^6\}$ $+ 129\{4^23\}$
$+ 337\{4^221\}$ $+ 197\{4^21^3\}$ $+ 290\{43^21\}$ $+ 320\{432^2\}$ $+ 533\{4321^2\}$
$+ 247\{431^4\}$ $+ 269\{42^31\}$ $+ 276\{42^21^3\}$ $+ 136\{421^5\}$ $+ 31\{41^7\}$
$+ 103\{3^32\}$ $+ 143\{3^31^2\}$ $+ 213\{3^22^21\}$ $+ 205\{3^221^3\}$ $+ 81\{3^21^5\}$
$+ 78\{32^4\}$ $+ 145\{32^31^2\}$ $+ 116\{32^21^4\}$ $+ 52\{321^6\}$ $+ 13\{31^8\}$
$+ 28\{2^51\}$ $+ 36\{2^41^3\}$ $+ 24\{2^31^5\}$ $+ 11\{2^21^7\}$ $+ 4\{21^9\}$
$+ \{1^{11}\ \}$

sum = 10612

n = 12

$37\{12\}$ + $50\{11\,1\}$ + $119\{10\,2\}$ + $82\{10\,1^2\}$ + $157\{93\}$
+ $259\{921\}$ + $126\{91^3\}$ + $186\{84\}$ + $429\{831\}$ + $308\{82^2\}$
+ $393\{821^2\}$ + $136\{81^4\}$ + $134\{75\}$ + $481\{741\}$ + $595\{732\}$
+ $684\{731^2\}$ + $580\{72^21\}$ + $455\{721^3\}$ + $122\{71^5\}$ + $59\{6^2\}$
+ $314\{651\}$ + $656\{642\}$ + $671\{641^2\}$ + $360\{63^2\}$ + $1172\{6321\}$
+ $729\{631^3\}$ + $421\{62^3\}$ + $683\{62^21^2\}$ + $404\{621^4\}$ + $94\{61^6\}$
+ $271\{5^22\}$ + $295\{5^21^2\}$ + $400\{543\}$ + $1017\{5421\}$ + $586\{541^3\}$
+ $704\{53^21\}$ + $741\{532^2\}$ + $1231\{5321^2\}$ + $555\{531^4\}$ + $565\{52^31\}$
+ $577\{52^21^3\}$ + $278\{521^5\}$ + $61\{51^7\}$ + $90\{4^3\}$ + $451\{4^231\}$
+ $418\{4^22^2\}$ + $639\{4^21^2\}$ + $281\{4^21^4\}$ + $425\{43^22\}$ + $587\{43^21^2\}$
+ $815\{432^21\}$ + $772\{4321^3\}$ + $295\{431^5\}$ + $228\{42^4\}$ + $422\{42^31^2\}$
+ $337\{42^21^4\}$ + $144\{421^6\}$ + $32\{41^8\}$ + $68\{3^4\}$ + $276\{3^321\}$
+ $209\{3^31^3\}$ + $170\{3^22^3\}$ + $352\{3^22^21^2\}$ + $248\{3^221^4\}$ + $88\{3^21^6\}$
+ $154\{32^41\}$ + $189\{32^31^3\}$ + $125\{32^21^5\}$ + $52\{321^7\}$ + $13\{31^9\}$
+ $25\{2^6\}$ + $38\{2^51^2\}$ + $40\{2^41^4\}$ + $24\{2^31^6\}$ + $11\{2^21^8\}$
+ $4\{21^{10}\}$ + $\{1^{12}\}$

sum = 26200

n = 13

$43\{13\}$ + $61\{12\,1\}$ + $146\{11\,2\}$ + $101\{11\,1^2\}$ + $205\{10\,3\}$
+ $332\{10\,21\}$ + $159\{10\,1^3\}$ + $253\{94\}$ + $580\{931\}$ + $409\{92^2\}$
+ $525\{921^2\}$ + $179\{91^4\}$ + $217\{85\}$ + $717\{841\}$ + $864\{832\}$
+ $978\{831^2\}$ + $823\{82^21\}$ + $639\{821^3\}$ + $170\{81^5\}$ + $132\{76\}$
+ $583\{751\}$ + $1090\{742\}$ + $1121\{741^2\}$ + $583\{73^2\}$ + $1858\{7321\}$
+ $1144\{731^3\}$ + $642\{72^3\}$ + $1052\{72^21^2\}$ + $614\{721^4\}$ + $141\{71^6\}$
+ $232\{6^21\}$ + $748\{652\}$ + $765\{651^2\}$ + $840\{643\}$ + $2074\{6421\}$
+ $1171\{641^3\}$ + $1318\{63^21\}$ + $1377\{632^2\}$ + $2251\{6321^2\}$ + $1008\{631^4\}$
+ $992\{62^31\}$ + $1004\{62^21^3\}$ + $481\{621^5\}$ + $102\{61^7\}$ + $390\{5^23\}$
+ $917\{5^221\}$ + $510\{5^21^3\}$ + $290\{54^2\}$ + $1470\{5431\}$ + $1263\{542^2\}$
+ $1987\{5421^2\}$ + $831\{541^4\}$ + $1062\{53^22\}$ + $1440\{53^21^2\}$ + $1933\{532^21\}$
+ $1819\{5321^3\}$ + $680\{531^5\}$ + $478\{52^4\}$ + $914\{52^31^2\}$ + $717\{52^21^4\}$
+ $305\{521^6\}$ + $63\{51^8\}$ + $304\{4^31\}$ + $727\{4^232\}$ + $944\{4^231^2\}$
+ $1060\{4^22^21\}$ + $970\{4^221^3\}$ + $340\{4^21^5\}$ + $280\{43^3\}$ + $1184\{43^221\}$
+ $889\{43^21^3\}$ + $692\{432^3\}$ + $1357\{432^21^2\}$ + $969\{4321^4\}$ + $324\{431^6\}$
+ $467\{42^41\}$ + $565\{42^31^3\}$ + $371\{42^21^5\}$ + $149\{421^7\}$ + $32\{41^9\}$
+ $189\{3^41\}$ + $252\{3^32^2\}$ + $474\{3^321^2\}$ + $265\{3^31^4\}$ + $392\{3^22^31\}$
+ $458\{3^22^21^3\}$ + $280\{3^221^5\}$ + $89\{3^21^7\}$ + $111\{32^5\}$ + $227\{32^41^2\}$
+ $215\{32^31^4\}$ + $128\{32^21^6\}$ + $52\{321^8\}$ + $13\{31^{10}\}$ + $37\{2^61\}$
+ $51\{2^51^3\}$ + $40\{2^41^5\}$ + $24\{2^31^7\}$ + $11\{2^21^9\}$ + $4\{21^{11}\}$
+ $\{1^{13}\}$

sum = 62730

n = 14

$50\{14\}$ + $72\{13\ 1\}$ + $178\{12\ 2\}$ + $122\{12\ 1^2\}$ + $256\{11\ 3\}$
+ $413\{11\ 21\}$ + $197\{11\ 1^3\}$ + $336\{10\ 4\}$ + $755\{10\ 31\}$ + $528\{10\ 2^2\}$
+ $674\{10\ 21^2\}$ + $228\{10\ 1^4\}$ + $310\{95\}$ + $996\{941\}$ + $1179\{932\}$
+ $1331\{931^2\}$ + $1107\{92^21\}$ + $856\{921^3\}$ + $225\{91^5\}$ + $240\{86\}$
+ $933\{851\}$ + $1647\{842\}$ + $1675\{841^2\}$ + $859\{83^2\}$ + $2706\{8321\}$
+ $1652\{831^3\}$ + $919\{82^3\}$ + $1501\{82^21^2\}$ + $872\{821^4\}$ + $198\{81^6\}$
+ $78\{7^2\}$ + $571\{761\}$ + $1412\{752\}$ + $1442\{751^2\}$ + $1444\{743\}$
+ $3510\{7421\}$ + $1965\{741^3\}$ + $2148\{73^21\}$ + $2209\{732^2\}$ + $3602\{7321^2\}$
+ $1597\{731^4\}$ + $1546\{72^31\}$ + $1561\{72^21^3\}$ + $743\{721^5\}$ + $156\{71^7\}$
+ $581\{6^22\}$ + $551\{6^21^2\}$ + $1104\{653\}$ + $2504\{6521\}$ + $1357\{651^3\}$
+ $648\{64^2\}$ + $3116\{6431\}$ + $2634\{642^2\}$ + $4098\{6421^2\}$ + $1694\{641^4\}$
+ $2037\{63^22\}$ + $2742\{63^21^2\}$ + $3618\{632^21\}$ + $3384\{6321^3\}$ + $1254\{631^5\}$
+ $851\{62^4\}$ + $1626\{62^31^2\}$ + $1274\{62^21^4\}$ + $537\{621^6\}$ + $108\{61^8\}$
+ $361\{5^24\}$ + $1510\{5^231\}$ + $1160\{5^22^2\}$ + $1851\{5^221^2\}$ + $723\{5^21^4\}$
+ $1097\{54^21\}$ + $2405\{5432\}$ + $3112\{5431^2\}$ + $3350\{542^21\}$ + $3044\{5421^3\}$
+ $1039\{541^5\}$ + $724\{53^3\}$ + $2993\{53^221\}$ + $2224\{53^21^3\}$ + $1672\{532^3\}$
+ $3287\{532^21^2\}$ + $2330\{5321^4\}$ + $770\{531^6\}$ + $1025\{52^41\}$ + $1240\{52^31^3\}$
+ $812\{52^21^5\}$ + $321\{521^7\}$ + $64\{51^9\}$ + $562\{4^32\}$ + $642\{4^31^2\}$
+ $509\{4^23^2\}$ + $2054\{4^2321\}$ + $1494\{4^231^3\}$ + $959\{4^22^3\}$ + $1792\{4^22^21^2\}$
+ $1258\{4^221^4\}$ + $378\{4^21^6\}$ + $862\{43^31\}$ + $1113\{43^22^2\}$ + $2079\{43^221^2\}$
+ $1151\{43^21^4\}$ + $1578\{432^31\}$ + $1835\{432^21^3\}$ + $1108\{4321^5\}$ + $340\{431^7\}$
+ $340\{42^5\}$ + $698\{42^41^2\}$ + $664\{42^31^4\}$ + $388\{42^21^6\}$ + $151\{421^8\}$
+ $32\{41^{10}\}$ + $237\{3^42\}$ + $341\{3^41^2\}$ + $597\{3^32^21\}$ + $647\{3^321^3\}$
+ $306\{3^31^5\}$ + $266\{3^22^4\}$ + $604\{3^22^31^2\}$ + $533\{3^22^21^4\}$ + $294\{3^221^6\}$
+ $89\{3^21^8\}$ + $214\{32^51\}$ + $287\{32^41^3\}$ + $228\{32^31^5\}$ + $128\{32^21^7\}$
+ $52\{321^9\}$ + $13\{31^{11}\}$ + $31\{2^7\}$ + $50\{2^61^2\}$ + $56\{2^51^4\}$
+ $40\{2^41^6\}$ + $24\{2^31^8\}$ + $11\{2^21^{10}\}$ + $4\{21^{12}\}$ + $\{1^{14}\}$

sum = 146871

n = 15

$57\{15\ \}$ + $85\{14\ 1\}$ + $211\{13\ 2\}$ + $145\{13\ 1^2\}$ + $316\{12\ 3\}$
+ $504\{12\ 21\}$ + $238\{12\ 1^3\}$ + $425\{11\ 4\}$ + $952\{11\ 31\}$ + $659\{11\ 2^2\}$
+ $844\{11\ 21^2\}$ + $283\{11\ 1^4\}$ + $427\{10\ 5\}$ + $1324\{10\ 41\}$ + $1548\{10\ 32\}$
+ $1733\{10\ 31^2\}$ + $1436\{10\ 2^21\}$ + $1104\{10\ 21^3\}$ + $289\{10\ 1^5\}$ + $363\{96\}$
+ $1356\{951\}$ + $2307\{942\}$ + $2349\{941^2\}$ + $1192\{93^2\}$ + $3716\{9321\}$
+ $2257\{931^3\}$ + $1240\{92^3\}$ + $2034\{92^21^2\}$ + $1174\{921^4\}$ + $265\{91^6\}$
+ $202\{87\}$ + $1034\{861\}$ + $2292\{852\}$ + $2301\{851^2\}$ + $2220\{843\}$
+ $5329\{8421\}$ + $2958\{841^3\}$ + $3178\{83^21\}$ + $3257\{832^2\}$ + $5276\{8321^2\}$
+ $2332\{831^4\}$ + $2231\{82^31\}$ + $2244\{82^21^3\}$ + $1066\{821^5\}$ + $221\{81^7\}$
+ $378\{7^21\}$ + $1449\{762\}$ + $1414\{761^2\}$ + $2151\{753\}$ + $4791\{7521\}$
+ $2571\{751^3\}$ + $1146\{74^2\}$ + $5424\{7431\}$ + $4497\{742^2\}$ + $7009\{7421^2\}$
+ $2860\{741^4\}$ + $3365\{73^22\}$ + $4498\{73^21^2\}$ + $5870\{732^21\}$ + $5473\{7321^3\}$
+ $2016\{731^5\}$ + $1334\{72^4\}$ + $2571\{72^31^2\}$ + $2005\{72^21^4\}$ + $845\{721^6\}$
+ $167\{71^8\}$ + $907\{6^23\}$ + $1930\{6^221\}$ + $1007\{6^21^3\}$ + $1108\{654\}$
+ $4270\{6531\}$ + $3277\{652^2\}$ + $5090\{6521^2\}$ + $1986\{651^4\}$ + $2488\{64^21\}$
+ $5204\{6432\}$ + $6677\{6431^2\}$ + $7061\{642^21\}$ + $6370\{6421^3\}$ + $2155\{641^5\}$
+ $1407\{63^3\}$ + $5815\{63^221\}$ + $4309\{63^21^3\}$ + $3190\{632^3\}$ + $6225\{632^21^2\}$
+ $4415\{6321^4\}$ + $1444\{631^6\}$ + $1858\{62^41\}$ + $2243\{62^31^3\}$ + $1473\{62^21^5\}$
+ $577\{621^7\}$ + $112\{61^9\}$ + $187\{5^3\}$ + $1498\{5^241\}$ + $2546\{5^232\}$
+ $3253\{5^231^2\}$ + $3216\{5^22^21\}$ + $2872\{5^221^3\}$ + $933\{5^21^5\}$ + $2037\{54^22\}$
+ $2405\{54^21^2\}$ + $1789\{543^2\}$ + $6926\{54321\}$ + $4972\{5431^3\}$ + $3043\{542^3\}$
+ $5819\{542^21^2\}$ + $4007\{5421^4\}$ + $1200\{541^6\}$ + $2257\{53^31\}$ + $2882\{53^22^2\}$
+ $5337\{53^221^2\}$ + $2949\{53^21^4\}$ + $3892\{532^31\}$ + $4531\{532^21^3\}$ + $2726\{5321^5\}$
+ $824\{531^7\}$ + $742\{52^5\}$ + $1572\{52^41^2\}$ + $1484\{52^31^4\}$ + $873\{52^21^6\}$
+ $329\{521^8\}$ + $65\{51^{10}\ \}$ + $520\{4^33\}$ + $1591\{4^321\}$ + $1063\{4^31^3\}$
+ $1669\{4^23^21\}$ + $2033\{4^232^2\}$ + $3678\{4^2321^2\}$ + $1983\{4^231^4\}$ + $2187\{4^22^31\}$
+ $2507\{4^22^21^3\}$ + $1459\{4^221^5\}$ + $408\{4^21^7\}$ + $1085\{43^32\}$ + $1615\{43^31^2\}$
+ $2692\{43^22^21\}$ + $2901\{43^221^3\}$ + $1353\{43^21^5\}$ + $1127\{432^4\}$ + $2454\{432^31^2\}$
+ $2202\{432^21^4\}$ + $1186\{4321^6\}$ + $347\{431^8\}$ + $673\{42^51\}$ + $902\{42^41^3\}$
+ $717\{42^31^5\}$ + $397\{42^21^7\}$ + $151\{421^9\}$ + $32\{41^{11}\ \}$ + $114\{3^5\}$
+ $578\{3^421\}$ + $499\{3^41^3\}$ + $440\{3^32^3\}$ + $946\{3^32^21^2\}$ + $775\{3^321^4\}$
+ $328\{3^31^6\}$ + $579\{3^22^41\}$ + $759\{3^22^31^3\}$ + $584\{3^22^21^5\}$ + $296\{3^221^7\}$
+ $89\{3^21^9\}$ + $144\{32^6\}$ + $309\{32^51^2\}$ + $322\{32^41^4\}$ + $232\{32^31^6\}$
+ $128\{32^21^8\}$ + $52\{321^{10}\ \}$ + $13\{31^{12}\ \}$ + $46\{2^71\}$ + $66\{2^61^3\}$
+ $56\{2^51^5\}$ + $40\{2^41^7\}$ + $24\{2^31^9\}$ + $11\{2^21^{11}\ \}$ + $4\{21^{13}\ \}$
+ $\{1^{15}\ \}$

sum = 344939

n = 16

$65\{16\ \}$ + $98\{15\ 1\}$ + $249\{14\ 2\}$ + $170\{14\ 1^2\}$ + $379\{13\ 3\}$
+ $603\{13\ 21\}$ + $284\{13\ 1^3\}$ + $530\{12\ 4\}$ + $1173\{12\ 31\}$ + $808\{12\ 2^2\}$
+ $1031\{12\ 21^2\}$ + $344\{12\ 1^4\}$ + $554\{11\ 5\}$ + $1695\{11\ 41\}$ + $1963\{11\ 32\}$
+ $2194\{11\ 31^2\}$ + $1806\{11\ 2^21\}$ + $1385\{11\ 21^3\}$ + $360\{11\ 1^5\}$ + $521\{10\ 6\}$
+ $1860\{10\ 51\}$ + $3090\{10\ 42\}$ + $3127\{10\ 41^2\}$ + $1578\{10\ 3^2\}$ + $4888\{10\ 321\}$
+ $2955\{10\ 31^3\}$ + $1617\{10\ 2^3\}$ + $2647\{10\ 2^21^2\}$ + $1524\{10\ 21^4\}$ + $342\{10\ 1^6\}$
+ $347\{97\}$ + $1607\{961\}$ + $3360\{952\}$ + $3368\{951^2\}$ + $3160\{943\}$
+ $7527\{9421\}$ + $4160\{941^3\}$ + $4424\{93^21\}$ + $4501\{932^2\}$ + $7281\{9321^2\}$
+ $3203\{931^4\}$ + $3043\{92^31\}$ + $3057\{92^21^3\}$ + $1448\{921^5\}$ + $299\{91^7\}$
+ $138\{8^2\}$ + $927\{871\}$ + $2659\{862\}$ + $2559\{861^2\}$ + $3544\{853\}$
+ $7784\{8521\}$ + $4139\{851^3\}$ + $1808\{84^2\}$ + $8376\{8431\}$ + $6899\{842^2\}$
+ $10701\{8421^2\}$ + $4346\{841^4\}$ + $5034\{83^22\}$ + $6706\{83^21^2\}$ + $8695\{832^21\}$
+ $8086\{8321^3\}$ + $2970\{831^5\}$ + $1941\{82^4\}$ + $3737\{82^31^2\}$ + $2914\{82^21^4\}$
+ $1225\{821^6\}$ + $240\{81^8\}$ + $982\{7^22\}$ + $981\{7^21^2\}$ + $2356\{763\}$
+ $4959\{7621\}$ + $2577\{761^3\}$ + $2243\{754\}$ + $8397\{7531\}$ + $6336\{752^2\}$
+ $9823\{7521^2\}$ + $3791\{751^4\}$ + $4495\{74^21\}$ + $9157\{7432\}$ + $11707\{7431^2\}$
+ $12222\{742^21\}$ + $10990\{7421^3\}$ + $3692\{741^5\}$ + $2360\{73^3\}$ + $9674\{73^221\}$
+ $7141\{73^21^3\}$ + $5234\{732^3\}$ + $10215\{732^21^2\}$ + $7233\{7321^4\}$ + $2362\{731^6\}$
+ $2968\{72^41\}$ + $3584\{72^31^3\}$ + $2356\{72^21^5\}$ + $922\{721^7\}$ + $175\{71^9\}$
+ $1042\{6^24\}$ + $3505\{6^231\}$ + $2634\{6^22^2\}$ + $3964\{6^221^2\}$ + $1527\{6^21^4\}$
+ $636\{65^2\}$ + $4554\{6541\}$ + $7388\{6532\}$ + $9331\{6531^2\}$ + $9083\{652^21\}$
+ $8038\{6521^3\}$ + $2595\{651^5\}$ + $4698\{64^22\}$ + $5504\{64^21^2\}$ + $3951\{643^2\}$
+ $15154\{64321\}$ + $10827\{6431^3\}$ + $6515\{642^3\}$ + $12413\{642^21^2\}$ + $8529\{6421^4\}$
+ $2530\{641^6\}$ + $4484\{63^31\}$ + $5686\{63^22^2\}$ + $10510\{63^221^2\}$ + $5801\{63^21^4\}$
+ $7500\{632^31\}$ + $8735\{632^21^3\}$ + $5260\{6321^5\}$ + $1579\{631^7\}$ + $1360\{62^5\}$
+ $2890\{62^41^2\}$ + $2740\{62^31^4\}$ + $1613\{62^21^6\}$ + $604\{621^8\}$ + $114\{61^{10}\ \}$
+ $815\{5^31\}$ + $2841\{5^242\}$ + $3383\{5^241^2\}$ + $2050\{5^23^2\}$ + $7493\{5^2321\}$
+ $5261\{5^231^3\}$ + $2961\{5^22^3\}$ + $5740\{5^22^21^2\}$ + $3843\{5^221^4\}$ + $1117\{5^21^6\}$
+ $2000\{54^23\}$ + $6022\{54^221\}$ + $3979\{54^21^3\}$ + $5842\{543^21\}$ + $6966\{5432^2\}$
+ $12607\{54321^2\}$ + $6737\{5431^4\}$ + $7181\{542^31\}$ + $8239\{542^21^3\}$ + $4773\{5421^5\}$
+ $1314\{541^7\}$ + $2900\{53^32\}$ + $4291\{53^31^2\}$ + $7056\{53^22^21\}$ + $7600\{53^221^3\}$
+ $3539\{53^21^5\}$ + $2820\{532^4\}$ + $6168\{532^31^2\}$ + $5542\{532^21^4\}$ + $2989\{5321^6\}$
+ $853\{531^8\}$ + $1527\{52^51\}$ + $2057\{52^41^3\}$ + $1645\{52^31^5\}$ + $907\{52^21^7\}$
+ $334\{521^9\}$ + $65\{51^{11}\ \}$ + $258\{4^4\}$ + $1711\{4^331\}$ + $1699\{4^32^2\}$
+ $2906\{4^321^2\}$ + $1453\{4^31^4\}$ + $2165\{4^23^22\}$ + $3231\{4^23^21^2\}$ + $4959\{4^232^21\}$
+ $5261\{4^2321^3\}$ + $2361\{4^231^5\}$ + $1637\{4^22^4\}$ + $3448\{4^22^31^2\}$ + $3085\{4^22^21^4\}$
+ $1589\{4^221^6\}$ + $424\{4^21^8\}$ + $551\{43^4\}$ + $2774\{43^321\}$ + $2372\{43^31^3\}$
+ $2026\{43^22^3\}$ + $4342\{43^22^21^2\}$ + $3557\{43^221^4\}$ + $1480\{43^21^6\}$ + $2419\{432^41\}$
+ $3184\{432^31^3\}$ + $2443\{432^21^5\}$ + $1224\{4321^7\}$ + $348\{431^9\}$ + $452\{42^6\}$
+ $982\{42^51^2\}$ + $1039\{42^41^4\}$ + $743\{42^31^6\}$ + $400\{42^21^8\}$ + $151\{421^{10}\ \}$
+ $32\{41^{12}\ \}$ + $318\{3^51\}$ + $494\{3^42^2\}$ + $954\{3^421^2\}$ + $623\{3^41^4\}$
+ $966\{3^32^31\}$ + $1229\{3^32^21^3\}$ + $860\{3^321^5\}$ + $335\{3^31^7\}$ + $362\{3^22^5\}$
+ $864\{3^22^41^2\}$ + $866\{3^22^31^4\}$ + $605\{3^22^21^6\}$ + $296\{3^221^8\}$ + $89\{3^21^{10}\ \}$
+ $274\{32^61\}$ + $385\{32^51^3\}$ + $339\{32^41^5\}$ + $232\{32^31^7\}$ + $128\{32^21^9\}$
+ $52\{321^{11}\ \}$ + $13\{31^{13}\ \}$ + $37\{2^8\}$ + $62\{2^71^2\}$ + $72\{2^61^4\}$
+ $56\{2^51^6\}$ + $40\{2^41^8\}$ + $24\{2^31^{10}\ \}$ + $11\{2^21^{12}\ \}$ + $4\{21^{14}\ \}$
+ $\{1^{16}\ \}$

sum = 747037

n = 17

$73\{17\}$ + $113\{16\,1\}$ + $288\{15\,2\}$ + $197\{15\,1^2\}$ + $451\{14\,3\}$
+ $712\{14\,21\}$ + $333\{14\,1^3\}$ + $641\{13\,4\}$ + $1416\{13\,31\}$ + $969\{13\,2^2\}$
+ $1239\{13\,21^2\}$ + $411\{13\,1^4\}$ + $705\{12\,5\}$ + $2115\{12\,41\}$ + $2432\{12\,32\}$
+ $2704\{12\,31^2\}$ + $2221\{12\,2^21\}$ + $1697\{12\,21^3\}$ + $440\{12\,1^5\}$ + $694\{11\,6\}$
+ $2437\{11\,51\}$ + $3976\{11\,42\}$ + $4025\{11\,41^2\}$ + $2021\{11\,3^2\}$ + $6222\{11\,321\}$
+ $3750\{11\,31^3\}$ + $2038\{11\,2^3\}$ + $3344\{11\,2^21^2\}$ + $1918\{11\,21^4\}$ + $429\{11\,1^6\}$
+ $539\{10\,7\}$ + $2304\{10\,61\}$ + $4644\{10\,52\}$ + $4617\{10\,51^2\}$ + $4272\{10\,43\}$
+ $10108\{10\,421\}$ + $5561\{10\,41^3\}$ + $5870\{10\,3^21\}$ + $5961\{10\,32^2\}$ + $9609\{10\,321^2\}$
+ $4220\{10\,31^4\}$ + $3986\{10\,2^31\}$ + $3996\{10\,2^21^3\}$ + $1891\{10\,21^5\}$ + $388\{10\,1^7\}$
+ $303\{98\}$ + $1632\{971\}$ + $4166\{962\}$ + $4023\{961^2\}$ + $5273\{953\}$
+ $11483\{9521\}$ + $6077\{951^3\}$ + $2610\{94^2\}$ + $11990\{9431\}$ + $9794\{942^2\}$
+ $15194\{9421^2\}$ + $6136\{941^4\}$ + $7056\{93^22\}$ + $9368\{93^21^2\}$ + $12087\{932^21\}$
+ $11223\{9321^3\}$ + $4112\{931^5\}$ + $2658\{92^4\}$ + $5136\{92^31^2\}$ + $3997\{92^21^4\}$
+ $1681\{921^6\}$ + $327\{91^8\}$ + $603\{8^21\}$ + $2448\{872\}$ + $2362\{871^2\}$
+ $4394\{863\}$ + $9121\{8621\}$ + $4698\{861^3\}$ + $3804\{854\}$ + $13868\{8531\}$
+ $10417\{852^2\}$ + $16035\{8521^2\}$ + $6170\{851^4\}$ + $7134\{84^21\}$ + $14275\{8432\}$
+ $18185\{8431^2\}$ + $18855\{842^21\}$ + $16906\{8421^3\}$ + $5663\{841^5\}$ + $3555\{83^3\}$
+ $14566\{83^221\}$ + $10740\{83^21^3\}$ + $7829\{832^3\}$ + $15234\{832^21^2\}$ + $10793\{8321^4\}$
+ $3515\{831^6\}$ + $4359\{82^41\}$ + $5259\{82^31^3\}$ + $3465\{82^21^5\}$ + $1354\{821^7\}$
+ $255\{81^9\}$ + $1690\{7^23\}$ + $3478\{7^221\}$ + $1789\{7^21^3\}$ + $2795\{764\}$
+ $9284\{7631\}$ + $6781\{762^2\}$ + $10301\{7621^2\}$ + $3894\{761^4\}$ + $1390\{75^2\}$
+ $9318\{7541\}$ + $14694\{7532\}$ + $18473\{7531^2\}$ + $17752\{752^21\}$ + $15650\{7521^3\}$
+ $5018\{751^5\}$ + $8563\{74^22\}$ + $10054\{74^21^2\}$ + $7086\{743^2\}$ + $26896\{74321\}$
+ $19144\{7431^3\}$ + $11377\{742^3\}$ + $21739\{742^21^2\}$ + $14886\{7421^4\}$ + $4412\{741^6\}$
+ $7574\{73^31\}$ + $9573\{73^22^2\}$ + $17651\{73^221^2\}$ + $9745\{73^21^4\}$ + $12448\{732^31\}$
+ $14508\{732^21^3\}$ + $8748\{7321^5\}$ + $2623\{731^7\}$ + $2183\{72^5\}$ + $4681\{72^41^2\}$
+ $4437\{72^31^4\}$ + $2626\{72^21^6\}$ + $978\{721^8\}$ + $181\{71^{10}\}$ + $810\{6^25\}$
+ $4252\{6^241\}$ + $6274\{6^232\}$ + $7779\{6^231^2\}$ + $7323\{6^22^21\}$ + $6388\{6^221^3\}$
+ $2025\{6^21^5\}$ + $2778\{65^21\}$ + $8847\{6542\}$ + $10343\{6541^2\}$ + $6019\{653^2\}$
+ $21957\{65321\}$ + $15355\{6531^3\}$ + $8541\{652^3\}$ + $16330\{652^21^2\}$ + $10953\{6521^4\}$
+ $3132\{651^6\}$ + $4725\{64^23\}$ + $14038\{64^221\}$ + $9215\{64^21^3\}$ + $13067\{643^21\}$
+ $15461\{6432^2\}$ + $27928\{64321^2\}$ + $14896\{6431^4\}$ + $15560\{642^31\}$ + $17850\{642^21^3\}$
+ $10345\{6421^5\}$ + $2826\{641^7\}$ + $5823\{63^32\}$ + $8662\{63^31^2\}$ + $14088\{63^22^21\}$
+ $15201\{63^221^3\}$ + $7080\{63^21^5\}$ + $5526\{632^4\}$ + $12048\{632^31^2\}$ + $10889\{632^21^4\}$
+ $5878\{6321^6\}$ + $1669\{631^8\}$ + $2844\{62^51\}$ + $3842\{62^41^3\}$ + $3096\{62^31^5\}$
+ $1708\{62^21^7\}$ + $620\{621^9\}$ + $115\{61^{11}\}$ + $1628\{5^32\}$ + $1874\{5^31^2\}$
+ $3016\{5^243\}$ + $8693\{5^2421\}$ + $5621\{5^241^3\}$ + $6720\{5^23^21\}$ + $7703\{5^232^2\}$
+ $13880\{5^2321^2\}$ + $7265\{5^231^4\}$ + $7217\{5^22^31\}$ + $8239\{5^22^21^3\}$ + $4693\{5^221^5\}$
+ $1242\{5^21^7\}$ + $994\{54^3\}$ + $6729\{54^231\}$ + $6447\{54^22^2\}$ + $11220\{54^221^2\}$
+ $5505\{54^21^4\}$ + $7745\{543^22\}$ + $11394\{543^21^2\}$ + $17296\{5432^21\}$ + $18334\{54321^3\}$
+ $8211\{5431^5\}$ + $5383\{542^4\}$ + $11575\{542^31^2\}$ + $10292\{542^21^4\}$ + $5327\{5421^6\}$
+ $1381\{541^8\}$ + $1494\{53^4\}$ + $7518\{53^321\}$ + $6424\{53^31^3\}$ + $5408\{53^22^3\}$
+ $11550\{53^22^21^2\}$ + $9511\{53^221^4\}$ + $3948\{53^21^6\}$ + $6157\{532^41\}$ + $8149\{532^31^3\}$
+ $6282\{532^21^5\}$ + $3140\{5321^7\}$ + $869\{531^9\}$ + $1013\{52^6\}$ + $2277\{52^51^2\}$
+ $2410\{52^41^4\}$ + $1744\{52^31^6\}$ + $924\{52^21^8\}$ + $336\{521^{10}\}$ + $65\{51^{12}\}$
+ $834\{4^41\}$ + $2375\{4^332\}$ + $3381\{4^331^2\}$ + $4168\{4^32^21\}$ + $4267\{4^321^3\}$
+ $1747\{4^31^5\}$ + $1159\{4^23^3\}$ + $5718\{4^23^221\}$ + $4802\{4^23^21^3\}$ + $3864\{4^232^3\}$
+ $8115\{4^232^21^2\}$ + $6581\{4^2321^4\}$ + $2623\{4^231^6\}$ + $3502\{4^22^41\}$ + $4592\{4^22^31^3\}$
+ $3466\{4^22^21^5\}$ + $1671\{4^221^7\}$ + $427\{4^21^9\}$ + $1586\{43^41\}$ + $2363\{43^32^2\}$
+ $4677\{43^321^2\}$ + $3003\{43^31^4\}$ + $4518\{43^22^31\}$ + $5753\{43^22^21^3\}$ + $4021\{43^221^5\}$

n = 17 (contd)

$+ 1543\{43^2 1^7\}$ $+ 1570\{432^5\}$ $+ 3631\{432^4 1^2\}$ $+ 3723\{432^3 1^4\}$ $+ 2572\{432^2 1^6\}$
$+ 1238\{4321^8\}$ $+ 348\{431^{10}\}$ $+ 879\{42^6 1\}$ $+ 1247\{42^5 1^3\}$ $+ 1111\{42^4 1^5\}$
$+ 756\{42^3 1^7\}$ $+ 400\{42^2 1^9\}$ $+ 151\{421^{11}\}$ $+ 32\{41^{13}\}$ $+ 360\{3^5 2\}$
$+ 569\{3^5 1^2\}$ $+ 1101\{3^4 2^2 1\}$ $+ 1298\{3^4 21^3\}$ $+ 701\{3^4 1^5\}$ $+ 636\{3^3 2^4\}$
$+ 1466\{3^3 2^3 1^2\}$ $+ 1429\{3^3 2^2 1^4\}$ $+ 904\{3^3 21^6\}$ $+ 336\{3^3 1^8\}$ $+ 766\{3^2 2^5 1\}$
$+ 1068\{3^2 2^4 1^3\}$ $+ 936\{3^2 2^3 1^5\}$ $+ 608\{3^2 2^2 1^7\}$ $+ 296\{3^2 21^9\}$ $+ 89\{3^2 1^{11}\}$
$+ 177\{32^7\}$ $+ 391\{32^6 1^2\}$ $+ 429\{32^5 1^4\}$ $+ 344\{32^4 1^6\}$ $+ 232\{32^3 1^8\}$
$+ 128\{32^2 1^{10}\}$ $+ 52\{321^{12}\}$ $+ 13\{31^{14}\}$ $+ 55\{2^8 1\}$ $+ 81\{2^7 1^3\}$
$+ 72\{2^6 1^5\}$ $+ 56\{2^5 1^7\}$ $+ 40\{2^4 1^9\}$ $+ 24\{2^3 1^{11}\}$ $+ 11\{2^2 1^{13}\}$
$+ 4\{21^{15}\}$ $+ \{1^{17}\}$

sum = 1626621

n = 18

$82\{18\}$ + $128\{17\,1\}$ + $332\{16\,2\}$ + $226\{16\,1^2\}$ + $526\{15\,3\}$
+ $829\{15\,21\}$ + $387\{15\,1^3\}$ + $768\{14\,4\}$ + $1683\{14\,31\}$ + $1148\{14\,2^2\}$
+ $1464\{14\,21^2\}$ + $484\{14\,1^4\}$ + $866\{13\,5\}$ + $2578\{13\,41\}$ + $2947\{13\,32\}$
+ $3273\{13\,31^2\}$ + $2677\{13\,2^21\}$ + $2042\{13\,21^3\}$ + $527\{13\,1^5\}$ + $902\{12\,6\}$
+ $3095\{12\,51\}$ + $4985\{12\,42\}$ + $5027\{12\,41^2\}$ + $2517\{12\,3^2\}$ + $7718\{12\,321\}$
+ $4638\{12\,31^3\}$ + $2515\{12\,2^3\}$ + $4121\{12\,2^21^2\}$ + $2360\{12\,21^4\}$ + $526\{12\,1^6\}$
+ $752\{11\,7\}$ + $3111\{11\,61\}$ + $6116\{11\,52\}$ + $6074\{11\,51^2\}$ + $5548\{11\,43\}$
+ $13068\{11\,421\}$ + $7171\{11\,41^3\}$ + $7532\{11\,3^21\}$ + $7617\{11\,32^2\}$ + $12268\{11\,321^2\}$
+ $5373\{11\,31^4\}$ + $5056\{11\,2^31\}$ + $5065\{11\,2^21^3\}$ + $2393\{11\,21^5\}$ + $490\{11\,1^7\}$
+ $530\{10\,8\}$ + $2511\{10\,71\}$ + $6016\{10\,62\}$ + $5770\{10\,61^2\}$ + $7348\{10\,53\}$
+ $15888\{10\,521\}$ + $8369\{10\,51^3\}$ + $3576\{10\,4^2\}$ + $16248\{10\,431\}$ + $13228\{10\,42^2\}$
+ $20468\{10\,421^2\}$ + $8246\{10\,41^4\}$ + $9419\{10\,3^22\}$ + $12482\{10\,3^21^2\}$ + $16052\{10\,32^21\}$
+ $14884\{10\,321^3\}$ + $5446\{10\,31^5\}$ + $3499\{10\,2^4\}$ + $6756\{10\,2^31^2\}$ + $5258\{10\,2^21^4\}$
+ $2209\{10\,21^6\}$ + $428\{10\,1^8\}$ + $172\{9^2\}$ + $1412\{981\}$ + $4347\{972\}$
+ $4199\{971^2\}$ + $6996\{963\}$ + $14418\{9621\}$ + $7399\{961^3\}$ + $5759\{954\}$
+ $20723\{9531\}$ + $15453\{952^2\}$ + $23759\{9521^2\}$ + $9098\{951^4\}$ + $10389\{94^21\}$
+ $20550\{9432\}$ + $26131\{9431^2\}$ + $26944\{942^21\}$ + $24122\{9421^3\}$ + $8058\{941^5\}$
+ $5020\{93^3\}$ + $20495\{93^221\}$ + $15086\{93^21^3\}$ + $10951\{932^3\}$ + $21306\{932^21^2\}$
+ $15087\{9321^4\}$ + $4913\{931^6\}$ + $6027\{92^41\}$ + $7272\{92^31^3\}$ + $4796\{92^21^5\}$
+ $1875\{921^7\}$ + $350\{91^9\}$ + $1628\{8^22\}$ + $1508\{8^21^2\}$ + $4252\{873\}$
+ $8594\{8721\}$ + $4364\{871^3\}$ + $5361\{864\}$ + $17366\{8631\}$ + $12602\{862^2\}$
+ $19033\{8621^2\}$ + $7165\{861^4\}$ + $2455\{85^2\}$ + $15824\{8541\}$ + $24509\{8532\}$
+ $30691\{8531^2\}$ + $29292\{852^21\}$ + $25746\{8521^3\}$ + $8232\{851^5\}$ + $13698\{84^22\}$
+ $16033\{84^21^2\}$ + $11149\{843^2\}$ + $42172\{84321\}$ + $29964\{8431^3\}$ + $17701\{842^3\}$
+ $33765\{842^21^2\}$ + $23115\{8421^4\}$ + $6836\{841^6\}$ + $11519\{83^31\}$ + $14534\{83^22^2\}$
+ $26775\{83^221^2\}$ + $14788\{83^21^4\}$ + $18742\{832^31\}$ + $21848\{832^21^3\}$ + $13196\{8321^5\}$
+ $3955\{831^7\}$ + $3232\{82^5\}$ + $6934\{82^41^2\}$ + $6588\{82^31^4\}$ + $3909\{82^21^6\}$
+ $1456\{821^8\}$ + $266\{81^{10}\}$ + $2132\{7^24\}$ + $6814\{7^231\}$ + $4790\{7^22^2\}$
+ $7324\{7^221^2\}$ + $2698\{7^21^4\}$ + $2348\{765\}$ + $11692\{7641\}$ + $16732\{7632\}$
+ $20719\{7631^2\}$ + $19184\{762^21\}$ + $16688\{7621^3\}$ + $5236\{761^5\}$ + $6092\{75^21\}$
+ $18293\{7542\}$ + $21324\{7541^2\}$ + $12177\{753^2\}$ + $44006\{75321\}$ + $30656\{7531^3\}$
+ $16861\{752^3\}$ + $32244\{752^21^2\}$ + $21570\{7521^4\}$ + $6151\{751^6\}$ + $8772\{74^23\}$
+ $25896\{74^221\}$ + $16956\{74^21^3\}$ + $23553\{743^21\}$ + $27714\{7432^2\}$ + $50043\{74321^2\}$
+ $26661\{7431^4\}$ + $27528\{742^31\}$ + $31599\{742^21^3\}$ + $18331\{7421^5\}$ + $5002\{741^7\}$
+ $9933\{73^32\}$ + $14763\{73^31^2\}$ + $23932\{73^22^21\}$ + $25848\{73^221^3\}$ + $12071\{73^21^5\}$
+ $9265\{732^4\}$ + $20234\{732^31^2\}$ + $18334\{732^21^4\}$ + $9937\{7321^6\}$ + $2813\{731^8\}$
+ $4646\{72^51\}$ + $6295\{72^41^3\}$ + $5099\{72^31^5\}$ + $2825\{72^21^7\}$ + $1018\{721^9\}$
+ $185\{71^{11}\}$ + $399\{6^3\}$ + $3483\{6^251\}$ + $8523\{6^242\}$ + $9735\{6^241^2\}$
+ $5246\{6^23^2\}$ + $18849\{6^2321\}$ + $13048\{6^231^3\}$ + $7059\{6^22^3\}$ + $13289\{6^22^21^2\}$
+ $8872\{6^221^4\}$ + $2467\{6^21^6\}$ + $5696\{65^22\}$ + $6480\{65^21^2\}$ + $9552\{6543\}$
+ $27180\{65421\}$ + $17462\{6541^3\}$ + $20115\{653^21\}$ + $22912\{6532^2\}$ + $41137\{65321^2\}$
+ $21498\{6531^4\}$ + $20914\{652^31\}$ + $23838\{652^21^3\}$ + $13576\{6521^5\}$ + $3558\{651^7\}$
+ $2431\{64^3\}$ + $16030\{64^231\}$ + $15223\{64^22^2\}$ + $26449\{64^221^2\}$ + $12952\{64^21^4\}$
+ $17533\{643^22\}$ + $25820\{643^21^2\}$ + $38826\{6432^21\}$ + $41209\{64321^3\}$ + $18457\{6431^5\}$
+ $11822\{642^4\}$ + $25424\{642^31^2\}$ + $22696\{642^21^4\}$ + $11759\{6421^6\}$ + $3033\{641^8\}$
+ $3041\{63^4\}$ + $15332\{63^321\}$ + $13132\{63^31^3\}$ + $10941\{63^22^3\}$ + $23390\{63^22^21^2\}$
+ $19351\{63^221^4\}$ + $8055\{63^21^6\}$ + $12184\{632^41\}$ + $16194\{632^31^3\}$ + $12565\{632^21^5\}$
+ $6294\{6321^7\}$ + $1723\{631^9\}$ + $1899\{62^6\}$ + $4296\{62^51^2\}$ + $4588\{62^41^4\}$
+ $3340\{62^31^6\}$ + $1769\{62^21^8\}$ + $628\{621^{10}\}$ + $116\{61^{12}\}$ + $1951\{5^33\}$
+ $5080\{5^321\}$ + $3149\{5^31^3\}$ + $1616\{5^24^2\}$ + $10320\{5^2431\}$ + $9425\{5^242^2\}$

n = 18 (Contd)

$+ 16490\{5^2421^2\}$ $+ 7875\{5^241^4\}$ $+ 9135\{5^23^22\}$ $+ 13229\{5^23^21^2\}$ $+ 19474\{5^232^21\}$
$+ 20508\{5^2321^3\}$ $+ 9044\{5^231^5\}$ $+ 5451\{5^22^4\}$ $+ 11878\{5^22^31^2\}$ $+ 10444\{5^22^21^4\}$
$+ 5352\{5^221^6\}$ $+ 1319\{5^21^8\}$ $+ 3454\{54^31\}$ $+ 9441\{54^232\}$ $+ 13422\{54^231^2\}$
$+ 16279\{54^22^21\}$ $+ 16643\{54^221^3\}$ $+ 6793\{54^21^5\}$ $+ 4209\{543^3\}$ $+ 20586\{543^221\}$
$+ 17275\{543^21^3\}$ $+ 13638\{5432^3\}$ $+ 28747\{5432^21^2\}$ $+ 23348\{54321^4\}$ $+ 9304\{5431^6\}$
$+ 11850\{542^41\}$ $+ 15608\{542^31^3\}$ $+ 11837\{542^21^5\}$ $+ 5685\{5421^7\}$ $+ 1417\{541^9\}$
$+ 4376\{53^41\}$ $+ 6500\{53^32^2\}$ $+ 12860\{53^321^2\}$ $+ 8295\{53^31^4\}$ $+ 12191\{53^22^31\}$
$+ 15592\{53^22^21^3\}$ $+ 10955\{53^221^5\}$ $+ 4195\{53^21^7\}$ $+ 4031\{532^5\}$ $+ 9394\{532^41^2\}$
$+ 9699\{532^31^4\}$ $+ 6752\{532^21^6\}$ $+ 3218\{5321^8\}$ $+ 876\{531^{10}\}$ $+ 2037\{52^61\}$
$+ 2922\{52^51^3\}$ $+ 2638\{52^41^5\}$ $+ 1797\{52^31^7\}$ $+ 933\{52^21^9\}$ $+ 336\{521^{11}\}$
$+ 65\{51^{13}\}$ $+ 1311\{4^42\}$ $+ 1666\{4^41^2\}$ $+ 1388\{4^33^2\}$ $+ 6350\{4^3321\}$
$+ 5138\{4^331^3\}$ $+ 3403\{4^32^3\}$ $+ 6913\{4^32^21^2\}$ $+ 5424\{4^321^4\}$ $+ 1960\{4^31^6\}$
$+ 3463\{4^23^31\}$ $+ 4940\{4^23^22^2\}$ $+ 9805\{4^23^221^2\}$ $+ 6155\{4^23^21^4\}$ $+ 8666\{4^232^31\}$
$+ 10964\{4^232^21^3\}$ $+ 7538\{4^2321^5\}$ $+ 2781\{4^231^7\}$ $+ 2346\{4^22^5\}$ $+ 5303\{4^22^41^2\}$
$+ 5471\{4^22^31^4\}$ $+ 3698\{4^22^21^6\}$ $+ 1706\{4^221^8\}$ $+ 427\{4^21^{10}\}$ $+ 1808\{43^42\}$
$+ 2874\{43^41^2\}$ $+ 5456\{43^32^21\}$ $+ 6420\{43^321^3\}$ $+ 3460\{43^31^5\}$ $+ 3010\{43^22^4\}$
$+ 6946\{43^22^31^2\}$ $+ 6824\{43^22^21^4\}$ $+ 4293\{43^221^6\}$ $+ 1568\{43^21^8\}$ $+ 3268\{432^51\}$
$+ 4613\{432^41^3\}$ $+ 4066\{432^31^5\}$ $+ 2632\{432^21^7\}$ $+ 1240\{4321^9\}$ $+ 348\{431^{11}\}$
$+ 564\{42^7\}$ $+ 1266\{42^61^2\}$ $+ 1422\{42^51^4\}$ $+ 1146\{42^41^6\}$ $+ 760\{42^31^8\}$
$+ 400\{42^21^{10}\}$ $+ 151\{421^{12}\}$ $+ 32\{41^{14}\}$ $+ 149\{3^6\}$ $+ 876\{3^521\}$
$+ 813\{3^51^3\}$ $+ 791\{3^42^3\}$ $+ 1711\{3^42^21^2\}$ $+ 1550\{3^421^4\}$ $+ 746\{3^41^6\}$
$+ 1343\{3^32^41\}$ $+ 1859\{3^32^31^3\}$ $+ 1558\{3^32^21^5\}$ $+ 918\{3^321^7\}$ $+ 336\{3^31^9\}$
$+ 458\{3^22^6\}$ $+ 1124\{3^22^51^2\}$ $+ 1207\{3^22^41^4\}$ $+ 964\{3^22^31^6\}$ $+ 608\{3^22^21^8\}$
$+ 296\{3^221^{10}\}$ $+ 89\{3^21^{12}\}$ $+ 334\{32^71\}$ $+ 483\{32^61^3\}$ $+ 450\{32^51^5\}$
$+ 344\{32^41^7\}$ $+ 232\{32^31^9\}$ $+ 128\{32^21^{11}\}$ $+ 52\{321^{13}\}$ $+ 13\{31^{15}\}$
$+ 43\{2^9\}$ $+ 74\{2^81^2\}$ $+ 88\{2^71^4\}$ $+ 72\{2^61^6\}$ $+ 56\{2^51^8\}$
$+ 40\{2^41^{10}\}$ $+ 24\{2^31^{12}\}$ $+ 11\{2^21^{14}\}$ $+ 4\{21^{16}\}$ $+ \{1^{18}\}$

sum = 3468080

n = 19

$91\{19\ \}$ + $145\{18\ 1\}$ + $377\{17\ 2\}$ + $257\{17\ 1^2\}$ + $610\{16\ 3\}$
+ $956\{16\ 21\}$ + $444\{16\ 1^3\}$ + $901\{15\ 4\}$ + $1972\{15\ 31\}$ + $1339\{15\ 2^2\}$
+ $1710\{15\ 21^2\}$ + $563\{15\ 1^4\}$ + $1051\{14\ 5\}$ + $3090\{14\ 41\}$ + $3516\{14\ 32\}$
+ $3891\{14\ 31^2\}$ + $3178\{14\ 2^21\}$ + $2418\{14\ 21^3\}$ + $623\{14\ 1^5\}$ + $1125\{13\ 6\}$
+ $3826\{13\ 51\}$ + $6097\{13\ 42\}$ + $6149\{13\ 41^2\}$ + $3070\{13\ 3^2\}$ + $9376\{13\ 321\}$
+ $5623\{13\ 31^3\}$ + $3036\{13\ 2^3\}$ + $4982\{13\ 2^21^2\}$ + $2846\{13\ 21^4\}$ + $633\{13\ 1^6\}$
+ $1012\{12\ 7\}$ + $4042\{12\ 61\}$ + $7804\{12\ 52\}$ + $7713\{12\ 51^2\}$ + $6996\{12\ 43\}$
+ $16411\{12\ 421\}$ + $8980\{12\ 41^3\}$ + $9394\{12\ 3^21\}$ + $9489\{12\ 32^2\}$ + $15250\{12\ 321^2\}$
+ $6672\{12\ 31^4\}$ + $6257\{12\ 2^31\}$ + $6260\{12\ 2^21^3\}$ + $2956\{12\ 21^5\}$ + $603\{12\ 1^7\}$
+ $785\{11\ 8\}$ + $3546\{11\ 71\}$ + $8163\{11\ 62\}$ + $7836\{11\ 61^2\}$ + $9759\{11\ 53\}$
+ $20999\{11\ 521\}$ + $11031\{11\ 51^3\}$ + $4682\{11\ 4^2\}$ + $21168\{11\ 431\}$ + $17155\{11\ 42^2\}$
+ $26543\{11\ 421^2\}$ + $10660\{11\ 41^4\}$ + $12135\{11\ 3^22\}$ + $16050\{11\ 3^21^2\}$ + $20584\{11\ 32^21\}$
+ $19069\{11\ 321^3\}$ + $6968\{11\ 31^5\}$ + $4450\{11\ 2^4\}$ + $8609\{11\ 2^31^2\}$ + $6693\{11\ 2^21^4\}$
+ $2813\{11\ 21^6\}$ + $543\{11\ 1^8\}$ + $421\{10\ 9\}$ + $2456\{10\ 81\}$ + $6740\{10\ 72\}$
+ $6443\{10\ 71^2\}$ + $10190\{10\ 63\}$ + $20854\{10\ 621\}$ + $10654\{10\ 61^3\}$ + $8140\{10\ 54\}$
+ $28922\{10\ 531\}$ + $21512\{10\ 52^2\}$ + $32963\{10\ 521^2\}$ + $12601\{10\ 51^4\}$ + $14276\{10\ 4^21\}$
+ $27990\{10\ 432\}$ + $35525\{10\ 431^2\}$ + $36505\{10\ 42^21\}$ + $32634\{10\ 421^3\}$ + $10887\{10\ 41^5\}$
+ $6727\{10\ 3^3\}$ + $27457\{10\ 3^221\}$ + $20199\{10\ 3^21^3\}$ + $14624\{10\ 32^3\}$ + $28407\{10\ 32^21^2\}$
+ $20123\{10\ 321^4\}$ + $6546\{10\ 31^6\}$ + $7976\{10\ 2^41\}$ + $9619\{10\ 2^31^3\}$ + $6353\{10\ 2^21^5\}$
+ $2483\{10\ 21^7\}$ + $462\{10\ 1^9\}$ + $864\{9^21\}$ + $3841\{982\}$ + $3627\{981^2\}$
+ $7669\{973\}$ + $15378\{9721\}$ + $7775\{971^3\}$ + $8678\{964\}$ + $27816\{9631\}$
+ $20001\{962^2\}$ + $30229\{9621^2\}$ + $11310\{961^4\}$ + $3835\{95^2\}$ + $24072\{9541\}$
+ $36832\{9532\}$ + $46024\{9531^2\}$ + $43685\{952^21\}$ + $38332\{9521^3\}$ + $12224\{951^5\}$
+ $20043\{94^22\}$ + $23469\{94^21^2\}$ + $16188\{943^2\}$ + $60982\{94321\}$ + $43263\{9431^3\}$
+ $25428\{942^3\}$ + $48544\{942^21^2\}$ + $33197\{9421^4\}$ + $9819\{941^6\}$ + $16327\{93^31\}$
+ $20581\{93^22^2\}$ + $37870\{93^221^2\}$ + $20926\{93^21^4\}$ + $26382\{932^31\}$ + $30763\{932^21^3\}$
+ $18604\{9321^5\}$ + $5579\{931^7\}$ + $4487\{92^5\}$ + $9661\{92^41^2\}$ + $9181\{92^31^4\}$
+ $5466\{92^21^6\}$ + $2034\{921^8\}$ + $369\{91^{10}\ \}$ + $2883\{8^23\}$ + $5671\{8^221\}$
+ $2829\{8^21^3\}$ + $5540\{874\}$ + $17092\{8731\}$ + $12027\{872^2\}$ + $18144\{8721^2\}$
+ $6689\{871^4\}$ + $4700\{865\}$ + $22486\{8641\}$ + $31578\{8632\}$ + $38955\{8631^2\}$
+ $35798\{862^21\}$ + $31048\{8621^3\}$ + $9707\{861^5\}$ + $10774\{85^21\}$ + $31343\{8542\}$
+ $36371\{8541^2\}$ + $20471\{853^2\}$ + $73794\{85321\}$ + $51325\{8531^3\}$ + $28075\{852^3\}$
+ $53515\{852^21^2\}$ + $35808\{8521^4\}$ + $10176\{851^6\}$ + $14177\{84^23\}$ + $41654\{84^221\}$
+ $27216\{84^21^3\}$ + $37295\{843^21\}$ + $43791\{8432^2\}$ + $79015\{84321^2\}$ + $42104\{8431^4\}$
+ $43135\{842^31\}$ + $49519\{842^21^3\}$ + $28773\{8421^5\}$ + $7846\{841^7\}$ + $15201\{83^32\}$
+ $22641\{83^31^2\}$ + $36592\{83^22^21\}$ + $39565\{83^221^3\}$ + $18509\{83^21^5\}$ + $14085\{832^4\}$
+ $30722\{832^31^2\}$ + $27921\{832^21^4\}$ + $15175\{8321^6\}$ + $4301\{831^8\}$ + $6943\{82^51\}$
+ $9418\{82^41^3\}$ + $7664\{82^31^5\}$ + $4260\{82^21^7\}$ + $1533\{821^9\}$ + $274\{81^{11}\ \}$
+ $2052\{7^25\}$ + $9162\{7^241\}$ + $12428\{7^232\}$ + $15325\{7^231^2\}$ + $13817\{7^22^21\}$
+ $11946\{7^221^3\}$ + $3683\{7^21^5\}$ + $1267\{76^2\}$ + $10290\{7651\}$ + $23589\{7642\}$
+ $27040\{7641^2\}$ + $14322\{763^2\}$ + $50700\{76321\}$ + $34919\{7631^3\}$ + $18606\{762^3\}$
+ $35248\{762^21^2\}$ + $23386\{7621^4\}$ + $6505\{761^6\}$ + $12633\{75^22\}$ + $14275\{75^21^2\}$
+ $20072\{7543\}$ + $56668\{75421\}$ + $36301\{7541^3\}$ + $40937\{753^21\}$ + $46375\{7532^2\}$
+ $83178\{75321^2\}$ + $43414\{7531^4\}$ + $41737\{752^31\}$ + $47575\{752^21^3\}$ + $27105\{7521^5\}$
+ $7092\{751^7\}$ + $4580\{74^3\}$ + $30021\{74^231\}$ + $28290\{74^22^2\}$ + $49282\{74^221^2\}$
+ $24081\{74^21^4\}$ + $31899\{743^22\}$ + $46907\{743^21^2\}$ + $70288\{7432^21\}$ + $74684\{74321^3\}$
+ $33524\{7431^5\}$ + $21086\{742^4\}$ + $45520\{742^31^2\}$ + $40693\{742^21^4\}$ + $21175\{7421^6\}$
+ $5444\{741^8\}$ + $5222\{73^4\}$ + $26394\{73^321\}$ + $22654\{73^31^3\}$ + $18786\{73^22^3\}$
+ $40163\{73^22^21^2\}$ + $33371\{73^221^4\}$ + $13943\{73^21^6\}$ + $20662\{732^41\}$ + $27549\{732^31^3\}$
+ $21489\{732^21^5\}$ + $10812\{7321^7\}$ + $2948\{731^9\}$ + $3111\{72^6\}$ + $7112\{72^51^2\}$

n = 19 (Contd)

$+ 7622\{72^4 1^4\}$ $+ 5596\{72^3 1^6\}$ $+ 2965\{72^2 1^8\}$ $+ 1045\{721^{10}\}$ $+ 187\{71^{12}\}$
$+ 1672\{6^3 1\}$ $+ 7387\{6^2 52\}$ $+ 8199\{6^2 51^2\}$ $+ 9489\{6^2 43\}$ $+ 26340\{6^2 421\}$
$+ 16715\{6^2 41^3\}$ $+ 17873\{6^2 3^2 1\}$ $+ 20049\{6^2 32^2\}$ $+ 35747\{6^2 321^2\}$ $+ 18537\{6^2 31^4\}$
$+ 17394\{6^2 2^3 1\}$ $+ 19738\{6^2 2^2 1^3\}$ $+ 11163\{6^2 21^5\}$ $+ 2861\{6^2 1^7\}$ $+ 6927\{65^2 3\}$
$+ 17947\{65^2 21\}$ $+ 11067\{65^2 1^3\}$ $+ 5391\{654^2\}$ $+ 32949\{65431\}$ $+ 29945\{6542^2\}$
$+ 52031\{65421^2\}$ $+ 24858\{6541^4\}$ $+ 27615\{653^2 2\}$ $+ 40205\{653^2 1^2\}$ $+ 58472\{6532^2 1\}$
$+ 61622\{65321^3\}$ $+ 27134\{6531^5\}$ $+ 16085\{652^4\}$ $+ 34794\{652^3 1^2\}$ $+ 30785\{652^2 1^4\}$
$+ 15729\{6521^6\}$ $+ 3872\{651^8\}$ $+ 8524\{64^3 1\}$ $+ 22753\{64^2 32\}$ $+ 32310\{64^2 31^2\}$
$+ 38866\{64^2 2^2 1\}$ $+ 39772\{64^2 21^3\}$ $+ 16248\{64^2 1^5\}$ $+ 9634\{643^3\}$ $+ 47154\{643^2 21\}$
$+ 39674\{643^2 1^3\}$ $+ 30984\{6432^3\}$ $+ 65397\{6432^2 1^2\}$ $+ 53336\{64321^4\}$ $+ 21304\{6431^6\}$
$+ 26341\{642^4 1\}$ $+ 34818\{642^3 1^3\}$ $+ 26569\{642^2 1^5\}$ $+ 12782\{6421^7\}$ $+ 3157\{641^9\}$
$+ 9041\{63^4 1\}$ $+ 13368\{63^3 2^2\}$ $+ 26599\{63^3 21^2\}$ $+ 17216\{63^3 1^4\}$ $+ 24963\{63^2 2^3 1\}$
$+ 32085\{63^2 2^2 1^3\}$ $+ 22692\{63^2 21^5\}$ $+ 8721\{63^2 1^7\}$ $+ 8079\{632^5\}$ $+ 18824\{632^4 1^2\}$
$+ 19620\{632^3 1^4\}$ $+ 13744\{632^2 1^6\}$ $+ 6557\{6321^8\}$ $+ 1752\{631^{10}\}$ $+ 3872\{62^6 1\}$
$+ 5595\{62^5 1^3\}$ $+ 5113\{62^4 1^5\}$ $+ 3501\{62^3 1^7\}$ $+ 1803\{62^2 1^9\}$ $+ 633\{621^{11}\}$
$+ 116\{61^{13}\}$ $+ 1387\{5^3 4\}$ $+ 6735\{5^3 31\}$ $+ 5667\{5^3 2^2\}$ $+ 9774\{5^3 21^2\}$
$+ 4468\{5^3 1^4\}$ $+ 5897\{5^2 4^2 1\}$ $+ 14733\{5^2 432\}$ $+ 20775\{5^2 431^2\}$ $+ 24356\{5^2 42^2 1\}$
$+ 24726\{5^2 421^3\}$ $+ 9927\{5^2 41^5\}$ $+ 5105\{5^2 3^3\}$ $+ 24484\{5^2 3^2 21\}$ $+ 20403\{5^2 3^2 1^3\}$
$+ 15582\{5^2 32^3\}$ $+ 32857\{5^2 32^2 1^2\}$ $+ 26530\{5^2 321^4\}$ $+ 10429\{5^2 31^6\}$ $+ 12306\{5^2 2^4 1\}$
$+ 16214\{5^2 2^3 1^3\}$ $+ 12255\{5^2 2^2 1^5\}$ $+ 5787\{5^2 21^7\}$ $+ 1374\{5^2 1^9\}$ $+ 5405\{54^3 2\}$
$+ 7065\{54^3 1^2\}$ $+ 5670\{54^2 3^2\}$ $+ 25570\{54^2 321\}$ $+ 20656\{54^2 31^3\}$ $+ 13314\{54^2 2^3\}$
$+ 27474\{54^2 2^2 1^2\}$ $+ 21480\{54^2 21^4\}$ $+ 7785\{54^2 1^6\}$ $+ 12657\{543^3 1\}$ $+ 18103\{543^2 2^2\}$
$+ 35740\{543^2 21^2\}$ $+ 22593\{543^2 1^4\}$ $+ 31052\{5432^3 1\}$ $+ 39446\{5432^2 1^3\}$ $+ 27256\{54321^5\}$
$+ 10027\{5431^7\}$ $+ 7929\{542^5\}$ $+ 18295\{542^4 1^2\}$ $+ 18877\{542^3 1^4\}$ $+ 12894\{542^2 1^6\}$
$+ 5881\{5421^8\}$ $+ 1433\{541^{10}\}$ $+ 5047\{53^4 2\}$ $+ 8064\{53^4 1^2\}$ $+ 15193\{53^3 2^2 1\}$
$+ 17952\{53^3 21^3\}$ $+ 9727\{53^3 1^5\}$ $+ 8231\{53^2 2^4\}$ $+ 18998\{53^2 2^3 1^2\}$ $+ 18844\{53^2 2^2 1^4\}$
$+ 11911\{53^2 21^6\}$ $+ 4328\{53^2 1^8\}$ $+ 8500\{532^5 1\}$ $+ 12125\{532^4 1^3\}$ $+ 10796\{532^3 1^5\}$
$+ 7011\{532^2 1^7\}$ $+ 3256\{5321^9\}$ $+ 877\{531^{11}\}$ $+ 1284\{52^7\}$ $+ 2990\{52^6 1^2\}$
$+ 3384\{52^5 1^4\}$ $+ 2775\{52^4 1^6\}$ $+ 1823\{52^3 1^8\}$ $+ 936\{52^2 1^{10}\}$ $+ 336\{521^{12}\}$
$+ 65\{51^{14}\}$ $+ 1003\{4^4 3\}$ $+ 3520\{4^4 21\}$ $+ 2615\{4^4 1^3\}$ $+ 4270\{4^3 3^2 1\}$
$+ 5705\{4^3 32^2\}$ $+ 11027\{4^3 321^2\}$ $+ 6669\{4^3 31^4\}$ $+ 7655\{4^3 2^3 1\}$ $+ 9507\{4^3 2^2 1^3\}$
$+ 6264\{4^3 21^5\}$ $+ 2103\{4^3 1^7\}$ $+ 3998\{4^2 3^3 2\}$ $+ 6369\{4^2 3^3 1^2\}$ $+ 11661\{4^2 3^2 2^2 1\}$
$+ 13596\{4^2 3^2 21^3\}$ $+ 7202\{4^2 3^2 1^5\}$ $+ 5907\{4^2 32^4\}$ $+ 13456\{4^2 32^3 1^2\}$ $+ 13211\{4^2 32^2 1^4\}$
$+ 8144\{4^2 321^6\}$ $+ 2855\{4^2 31^8\}$ $+ 4849\{4^2 2^5 1\}$ $+ 6877\{4^2 2^4 1^3\}$ $+ 6033\{4^2 2^3 1^5\}$
$+ 3833\{4^2 2^2 1^7\}$ $+ 1712\{4^2 21^9\}$ $+ 427\{4^2 1^{11}\}$ $+ 781\{43^5\}$ $+ 4478\{43^4 21\}$
$+ 4151\{43^4 1^3\}$ $+ 3896\{43^3 2^3\}$ $+ 8632\{43^3 2^2 1^2\}$ $+ 7781\{43^3 21^4\}$ $+ 3748\{43^3 1^6\}$
$+ 6424\{43^2 2^4 1\}$ $+ 8949\{43^2 2^3 1^3\}$ $+ 7553\{43^2 2^2 1^5\}$ $+ 4422\{43^2 21^7\}$ $+ 1575\{43^2 1^9\}$
$+ 2013\{432^6\}$ $+ 4816\{432^5 1^2\}$ $+ 5324\{432^4 1^4\}$ $+ 4246\{432^3 1^6\}$ $+ 2653\{432^2 1^8\}$
$+ 1240\{4321^{10}\}$ $+ 348\{431^{12}\}$ $+ 1085\{42^7 1\}$ $+ 1592\{42^6 1^3\}$ $+ 1513\{42^5 1^5\}$
$+ 1163\{42^4 1^7\}$ $+ 760\{42^3 1^9\}$ $+ 400\{42^2 1^{11}\}$ $+ 151\{421^{13}\}$ $+ 32\{41^{15}\}$
$+ 426\{3^6 1\}$ $+ 701\{3^5 2^2\}$ $+ 1431\{3^5 21^2\}$ $+ 1006\{3^5 1^4\}$ $+ 1672\{3^4 2^3 1\}$
$+ 2241\{3^4 2^2 1^3\}$ $+ 1706\{3^4 21^5\}$ $+ 768\{3^4 1^7\}$ $+ 832\{3^3 2^5\}$ $+ 1994\{3^3 2^4 1^2\}$
$+ 2131\{3^3 2^3 1^4\}$ $+ 1624\{3^3 2^2 1^6\}$ $+ 920\{3^3 21^8\}$ $+ 336\{3^3 1^{10}\}$ $+ 953\{3^2 2^6 1\}$
$+ 1377\{3^2 2^5 1^3\}$ $+ 1296\{3^2 2^4 1^5\}$ $+ 968\{3^2 2^3 1^7\}$ $+ 608\{3^2 2^2 1^9\}$ $+ 296\{3^2 21^{11}\}$
$+ 89\{3^2 1^{13}\}$ $+ 210\{32^8\}$ $+ 473\{32^7 1^2\}$ $+ 536\{32^6 1^4\}$ $+ 456\{32^5 1^6\}$
$+ 344\{32^4 1^8\}$ $+ 232\{32^3 1^{10}\}$ $+ 128\{32^2 1^{12}\}$ $+ 52\{321^{14}\}$ $+ 13\{31^{16}\}$
$+ 64\{2^9 1\}$ $+ 96\{2^8 1^3\}$ $+ 88\{2^7 1^5\}$ $+ 72\{2^6 1^7\}$ $+ 56\{2^5 1^9\}$
$+ 40\{2^4 1^{11}\}$ $+ 24\{2^3 1^{13}\}$ $+ 11\{2^2 1^{15}\}$ $+ 4\{21^{17}\}$ $+ \{1^{19}\}$

sum = 7236303