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A213938: The n-th multiset representative in Abramowitz-Stegun order is a partition of a(n).

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A multiset (*ms*) is a finite set in which elements may appear more than once. See, *e.g.*, [2], p. 15 for the definition. The order (cardinality) of a multiset is the number of its elements. The signature of a multiset (*mss*) is a list of non-increasing positive integers which collects the multiplicities of its distinct elements. Such a multiset of order n, with m the length of its signature list, is called an $n-$multiset with m distinct elements. Here we are concerned with multisets with positive integer numbers as elements. A repetition class of multisets is defined by the signature. The number of members of a repetition class depends on the allowed set of distinct numbers. For example, the signature $[2,1]$ defines on the distinct number set $\{3,5,6\}$ the six multisets $\{3,3,5\}$, $\{3,3,6\}$, $\{5,5,3\}$, $\{5,5,6\}$, $\{6,6,3\}$ and $\{6,6,5\}$. The order within sets is not of importance. We will use also a list notation for multisets with their elements ordered non-decreasingly. For example the third example will be written as $[3,5,5]$. A multiset representative (*msr*) of a repetition class, encoded by its signature, is the one where all the elements sum to the least positive integer. The m distinct numbers of a *msr* are then from $I_m := [1, 2, ..., m]$. If the signature of a repetition class is $[e[1], e[2], ..., e[m]]$, with $e[1] \geq e[2] \geq ... \geq e[m] \geq 1$ then the *msr* can be written as $[1^{e[1]}, 2^{e[2]}, ..., m^{e[m]}]$ ('exponentiation'). But we will rewrite this in the explicit form where the integer j is repeated consecutively $e[j]$ times, for $j \in I_m$.

Partitions of n will be used like in *Abramowitz-Stegun* (*A-St*) [1], but we write them as lists in non-decreasing order, e.g., $pa(5,3,2) = [1,2^2] = [1,2,2]$ (we will prefer here the latter version) is the second partition of 5 in *A-St* order which has 3 parts. See [3] A036036 for the *A-St* ordering of partitions and a link to the *C. F. Hindenburg* reference from 1779 where this ordering has been used. The general notation will be $pa(n,m,j)$, with $n \in \mathbb{N}$, $m \in \{1,2,...,n\}$ and $j \in \{1,2,...,p(n,m)\}$. The table $p(n,m)$ is given in A008284. The partition $pa(n,m,j)$ will be the k-th in the list of all partitions, denoted by **Pa** (usually truncated at some finite value K). It is easy to compute k from $[n,m,j]$, and *vice versa*. The number of partitions of n, called $p(n)$, given in A0000041, will enter, as well as the triangular numbers $T(n) = \frac{1}{2}n(n+1)$, given in A000217. The *msr* $[1,2,...,n]$, which is an ordinary n-set, is a partition of $N = T(n)$. The empty partition $pa(0,0,1)$ corresponds to the empty multiset. This will not be considered further in this note.

Each partition $pa(n,m,j)$ (or $pa(k)$), written as a list, serves as a signature for a repetition class of multisets when this list is reversed, called then $partrev(n,m,j) \equiv mss(n,m,j)$. *E.g.*, $pa(5,3,1) = [1,1,3]$ and the corresponding signature is $mss(5,3,1) = [3,1,1]$ with the *msr* $[1^3,2^1,3^1] = [1,1,1,2,3]$. The last partition for a given n, $[1^n] = [1,...,1]$ (n times 1), will thus lead to the *msr* $[1,2,...,n]$. In this way the *A-St* list of partitions **Pa** is in one-to-one correspondence with a list of *msr*s, called the *A-St* -ordered list **MSr**. Specifically, $pa(n,m,j)$ is mapped to $msr(n,m,j)$, and *vice versa*. Similarly, $pa(k)$ maps to $msr(k)$, and *vice versa*. Note that due to the reversion of the partition list, when taken as signature, the *msr* are ordered like *A-St* partitions: the order n runs along the positive integers, the number of distinct members m increases from 1 to n, and *msr*s with the same n and the same m values are ordered lexicographically. Thus the *A-St* order is carried over from the list **Pa** to the list **MSr** (as mentioned above, we usually consider a finite list by truncation).

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Each *msr* $msr(n,m,j)$, resp. $msr(k)$, is again a partition of some number N, called $N(n,m,j)$, resp. $N(k)$. In the example $msr(5) = [1,1,2]$, (coming from $pa(5) = [1,2]$, $mss(5) = [2,1]$) one has $N(5) = 4$. The corresponding $[n,m,j]$ list is $[3,2,1]$. In A176723 these *msr*s appeared as multiset representative defining partitions, and a list of the first ones has been shown in the link given there. There are A185976(N_{max}) such multiset representatives among the partitions for $1 \leq N \leq N_{max}$. For example there are 192 such *msr*s for $N_{max} = 20$, as used later in *Table 2*. In order to connect to this we will give for each value N a number l which indicates that $msr(k)$, with value $N = N(k)$, is the l-th one for this N. In the example the value $N = 4$ appears for the first time, therefor $l(5) = 1$.

We computed the list of the first 9295 partitions in *A-St* order, as obtained from $n = 1, 2, ..., 25$. See A026905(25). From this the following list of the first (non-empty) 194 multiset representatives (belonging to $n = 1, 2, ..., 11$) has been computed (in *A-St* , pp. 831-2, one finds the first (non-empty) 138 partitions for $n = 1, 2, ..., 10$).

The columns in the following *Table 1* are: k, the position in the A-St ordered set **Pa** (an infinite list, usually cut off at some K, here 194), the corresponding place $[n,m,j]$, with $n = 1, 2, ..., m = 1, 2, ..., n$ and $j = 1, 2, ..., p(n,m)$, the signature *mss* (exponents, reversed A-St partitions as a list, called *partrev*), the *msr* as a list, and finally a 2-list with values N, of which *msr* is a partition, and l, telling that N appears for the l-th time.

In *Table 2* we give the *msr*s in a different order, labeled with $q = 1, 2, ...$, with $N = 1, 2, ...$, and for each N there are $l_{max} :=$ A007294(N) *msr*s. Each of these l_{max} partitions of N is sorted according to its number of parts M, hence M is the sum over the corresponding signature list *mss* , and it will be the $J-th$ of the M-parts partitions of N. This ordering is the one used earlier in A176723 for the multiset representative defining partitions.

We refer also to the counting problems, called 'multiset choose r', for $r = 1, 2, ...$, a generalization of the binomials n choose r, which gives the number of possibilities to pick from a multiset r elements (the order is not relevant). E.g., $msr(9) = [1,1,2,2]$, and '$[1,1,2,2]$ multichoose 4' is 3, from the three choices $[1,1]$, $[2,2]$ and $]1,2]$. For the *msr*s the arrays for 'multiset choose r', are given for $r = 1, 2, ..., 5$ in A176725, A187445, A187449, A187450 and A187451, respectively. This should not be confused with 'n multichoose r ', which is the number of $r-$multisets with n distinct symbols (here numbers), *e.g.*, '3 multichoose 2', with $I_2 = [1,2]$, equals 4 from the four multisets $\{1,1,1\}$, $\{2,2,2\}$, $\{1,1,2\}$ and $\{2,2,1\}$. See, *e.g.*, WolframMathWorld [4] and A071919.

k	**[n, m, j]**	**mss = partrev**	**msr**	**[N, l]**
1	[1, 1, 1]	[1]	[1]	[1, 1]
2	[2, 1, 1]	[2]	[1, 1]	[2, 1]
3	[2, 2, 1]	[1, 1]	[1, 2]	[3, 1]
4	[3, 1, 1]	[3]	[1, 1, 1]	[3, 2]
5	[3, 2, 1]	[2, 1]	[1, 1, 2]	[4, 1]
6	[3, 3, 1]	[1, 1, 1]	[1, 2, 3]	[6, 1]
7	[4, 1, 1]	[4]	[1, 1, 1, 1]	[4, 2]
8	[4, 2, 1]	[3, 1]	[1, 1, 1, 2]	[5, 1]
9	[4, 2, 2]	[2, 2]	[1, 1, 2, 2]	[6, 2]
10	[4, 3, 1]	[2, 1, 1]	[1, 1, 2, 3]	[7, 1]
11	[4, 4, 1]	[1, 1, 1, 1]	[1, 2, 3, 4]	[10, 1]
12	[5, 1, 1]	[5]	[1, 1, 1, 1, 1]	[5, 2]
13	[5, 2, 1]	[4, 1]	[1, 1, 1, 1, 2]	[6, 3]
14	[5, 2, 2]	[3, 2]	[1, 1, 1, 2, 2]	[7, 2]
15	[5, 3, 1]	[3, 1, 1]	[1, 1, 1, 2, 3]	[8, 1]
16	[5, 3, 2]	[2, 2, 1]	[1, 1, 2, 2, 3]	[9, 1]
17	[5, 4, 1]	[2, 1, 1, 1]	[1, 1, 2, 3, 4]	[11, 1]
18	[5, 5, 1]	[2, 2, 1]	[1, 2, 3, 4, 5]	[15, 1]
19	[6, 1, 1]	[6]	[1, 1, 1, 1, 1, 1]	[6, 4]
20	[6, 2, 1]	[5, 1]	[1, 1, 1, 1, 1, 2]	[7, 3]
21	[6, 2, 2]	[4, 2]	[1, 1, 1, 1, 2, 2]	[8, 2]
22	[6, 2, 3]	[3, 3]	[1, 1, 1, 2, 2, 2]	[9, 2]
23	[6, 3, 1]	[4, 1, 1]	[1, 1, 1, 1, 2, 3]	[9, 3]
24	[6, 3, 2]	[3, 2, 1]	[1, 1, 1, 2, 2, 3]	[10, 2]
25	[6, 3, 3]	[2, 2, 2]	[1, 1, 2, 2, 3, 3]	[12, 1]
26	[6, 4, 1]	[3, 1, 1, 1]	[1, 1, 1, 2, 3, 4]	[12, 2]
27	[6, 4, 2]	[2, 2, 1, 1]	[1, 1, 2, 2, 3, 4]	[13, 1]
28	[6, 5, 1]	[2, 1, 1, 1, 1]	[1, 1, 2, 3, 4, 5]	[16, 1]
29	[6, 6, 1]	[1, 1, 1, 1, 1, 1]	[1, 2, 3, 4, 5, 6]	[21, 1]
30	[7, 1, 1]	[7]	[1, 1, 1, 1, 1, 1, 1]	[7, 4]
31	[7, 2, 1]	[6, 1]	[1, 1, 1, 1, 1, 1, 2]	[8, 3]
32	[7, 2, 2]	[5, 2]	[1, 1, 1, 1, 1, 2, 2]	[9, 4]
33	[7, 2, 3]	[4, 3]	[1, 1, 1, 1, 2, 2, 2]	[10, 3]
34	[7, 3, 1]	[5, 1, 1]	[1, 1, 1, 1, 1, 2, 3]	[10, 4]
35	[7, 3, 2]	[4, 2, 1]	[1, 1, 1, 1, 2, 2, 3]	[11, 2]
36	[7, 3, 3]	[3, 3, 1]	[1, 1, 1, 2, 2, 2, 3]	[12, 3]
37	[7, 3, 4]	[3, 2, 2]	[1, 1, 1, 2, 2, 3, 3]	[13, 2]
38	[7, 4, 1]	[4, 1, 1, 1]	[1, 1, 1, 1, 2, 3, 4]	[13, 3]
39	[7, 4, 2]	[3, 2, 1, 1]	[1, 1, 1, 2, 2, 3, 4]	[14, 1]
40	[7, 4, 3]	[2, 2, 2, 1]	[1, 1, 2, 2, 3, 3, 4]	[16, 2]
41	[7, 5, 1]	[3, 1, 1, 1, 1]	[1, 1, 1, 2, 3, 4, 5]	[17, 1]
42	[7, 5, 2]	[2, 2, 1, 1, 1]	[1, 1, 2, 2, 3, 4, 5]	[18, 1]
43	[7, 6, 1]	[2, 1, 1, 1, 1, 1]	[1, 1, 2, 3, 4, 5, 6]	[22, 1]
44	[7, 7, 1]	[1, 1, 1, 1, 1, 1, 1]	[1, 2, 3, 4, 5, 6, 7]	[28, 1]
cont'd				

Table: Multiset representatives in A-St order. See the text for details on the columns.

k	[n, m, j]	mss = partrev	msr	[N, l]
45	[8, 1, 1]	[8]	[1, 1, 1, 1, 1, 1, 1, 1]	[8, 4]
46	[8, 2, 1]	[7, 1]	[1, 1, 1, 1, 1, 1, 1, 2]	[9, 5]
47	[8, 2, 2]	[6, 2]	[1, 1, 1, 1, 1, 1, 2, 2]	[10, 5]
48	[8, 2, 3]	[5, 3]	[1, 1, 1, 1, 1, 2, 2, 2]	[11, 3]
49	[8, 2, 4]	[4, 4]	[1, 1, 1, 1, 2, 2, 2, 2]	[12, 4]
50	[8, 3, 1]	[6, 1, 1]	[1, 1, 1, 1, 1, 1, 2, 3]	[11, 4]
51	[8, 3, 2]	[5, 2, 1]	[1, 1, 1, 1, 1, 2, 2, 3]	[12, 5]
52	[8, 3, 3]	[4, 3, 1]	[1, 1, 1, 1, 2, 2, 2, 3]	[13, 4]
53	[8, 3, 4]	[4, 2, 2]	[1, 1, 1, 1, 2, 2, 3, 3]	[14, 2]
54	[8, 3, 5]	[3, 3, 2]	[1, 1, 1, 2, 2, 2, 3, 3]	[15, 2]
55	[8, 4, 1]	[5, 1, 1, 1]	[1, 1, 1, 1, 1, 2, 3, 4]	[14, 3]
56	[8, 4, 2]	[4, 2, 1, 1]	[1, 1, 1, 1, 2, 2, 3, 4]	[15, 3]
57	[8, 4, 3]	[3, 3, 1, 1]	[1, 1, 1, 2, 2, 2, 3, 4]	[16, 3]
58	[8, 4, 4]	[3, 2, 2, 1]	[1, 1, 1, 2, 2, 3, 3, 4]	[17, 2]
59	[8, 4, 5]	[2, 2, 2, 2]	[1, 1, 2, 2, 3, 3, 4, 4]	[20, 1]
60	[8, 5, 1]	[4, 1, 1, 1, 1]	[1, 1, 1, 1, 2, 3, 4, 5]	[18, 2]
61	[8, 5, 2]	[3, 2, 1, 1, 1]	[1, 1, 1, 2, 2, 3, 4, 5]	[19, 1]
62	[8, 5, 3]	[2, 2, 2, 1, 1]	[1, 1, 2, 2, 3, 3, 4, 5]	[21, 2]
63	[8, 6, 1]	[3, 1, 1, 1, 1, 1]	[1, 1, 1, 2, 3, 4, 5, 6]	[23, 1]
64	[8, 6, 2]	[2, 2, 1, 1, 1, 1]	[1, 1, 2, 2, 3, 4, 5, 6]	[24, 1]
65	[8, 7, 1]	[2, 1, 1, 1, 1, 1, 1]	[1, 1, 2, 3, 4, 5, 6, 7]	[29, 1]
66	[8, 8, 1]	[1, 1, 1, 1, 1, 1, 1, 1]	[1, 2, 3, 4, 5, 6, 7, 8]	[36, 1]
67	[9, 1, 1]	[9]	[1, 1, 1, 1, 1, 1, 1, 1, 1]	[9, 6]
68	[9, 2, 1]	[8, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 2]	[10, 6]
69	[9, 2, 2]	[7, 2]	[1, 1, 1, 1, 1, 1, 1, 2, 2]	[11, 5]
70	[9, 2, 3]	[6, 3]	[1, 1, 1, 1, 1, 1, 2, 2, 2]	[12, 6]
71	[9, 2, 4]	[5, 4]	[1, 1, 1, 1, 1, 2, 2, 2, 2]	[13, 5]
72	[9, 3, 1]	[7, 1, 1]	[1, 1, 1, 1, 1, 1, 1, 2, 3]	[12, 7]
73	[9, 3, 2]	[6, 2, 1]	[1, 1, 1, 1, 1, 1, 2, 2, 3]	[13, 6]
74	[9, 3, 3]	[5, 3, 1]	[1, 1, 1, 1, 1, 2, 2, 2, 3]	[14, 4]
75	[9, 3, 4]	[4, 4, 1]	[1, 1, 1, 1, 2, 2, 2, 2, 3]	[15, 4]
76	[9, 3, 5]	[5, 2, 2]	[1, 1, 1, 1, 1, 2, 2, 3, 3]	[15, 5]
77	[9, 3, 6]	[4, 3, 2]	[1, 1, 1, 1, 2, 2, 2, 3, 3]	[16, 4]
78	[9, 3, 7]	[3, 3, 3]	[1, 1, 1, 2, 2, 2, 3, 3, 3]	[18, 3]
79	[9, 4, 1]	[6, 1, 1, 1]	[1, 1, 1, 1, 1, 1, 2, 3, 4]	[15, 6]
80	[9, 4, 2]	[5, 2, 1, 1]	[1, 1, 1, 1, 1, 2, 2, 3, 4]	[16, 5]
81	[9, 4, 3]	[4, 3, 1, 1]	[1, 1, 1, 1, 2, 2, 2, 3, 4]	[17, 3]
82	[9, 4, 4]	[4, 2, 2, 1]	[1, 1, 1, 1, 2, 2, 3, 3, 4]	[18, 4]
83	[9, 4, 5]	[3, 3, 2, 1]	[1, 1, 1, 2, 2, 2, 3, 3, 4]	[19, 2]
84	[9, 4, 6]	[3, 2, 2, 2]	[1, 1, 1, 2, 2, 3, 3, 4, 4]	[21, 3]
85	[9, 5, 1]	[5, 1, 1, 1, 1]	[1, 1, 1, 1, 1, 2, 3, 4, 5]	[19, 3]
86	[9, 5, 2]	[4, 2, 1, 1, 1]	[1, 1, 1, 1, 2, 2, 3, 4, 5]	[20, 2]
87	[9, 5, 3]	[3, 3, 1, 1, 1]	[1, 1, 1, 2, 2, 2, 3, 4, 5]	[21, 4]
88	[9, 5, 4]	[3, 2, 2, 1, 1]	[1, 1, 1, 2, 2, 3, 3, 4, 5]	[22, 2]
89	[9, 5, 5]	[2, 2, 2, 2, 1]	[1, 1, 2, 2, 3, 3, 4, 4, 5]	[25, 1]
cont'd				

Table (cont'd): Multiset representatives in A-St order. See the text for details.

k	[n, m, j]	mss = partrev	msr	[N, l]
90	[9, 6, 1]	[4, 1, 1, 1, 1, 1]	[1, 1, 1, 1, 2, 3, 4, 5, 6]	[24, 2]
91	[9, 6, 2]	[3, 2, 1, 1, 1, 1]	[1, 1, 1, 2, 2, 3, 4, 5, 6]	[25, 2]
92	[9, 6, 3]	[2, 2, 2, 1, 1, 1]	[1, 1, 2, 2, 3, 3, 4, 5, 6]	[27, 1]
93	[9, 7, 1]	[3, 1, 1, 1, 1, 1, 1]	[1, 1, 1, 2, 3, 4, 5, 6, 7]	[30, 1]
94	[9, 7, 2]	[2, 2, 1, 1, 1, 1, 1]	[1, 1, 2, 2, 3, 4, 5, 6, 7]	[31, 1]
95	[9, 8, 1]	[2, 1, 1, 1, 1, 1, 1, 1]	[1, 1, 2, 3, 4, 5, 6, 7, 8]	[37, 1]
96	[9, 9, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1]	[1, 2, 3, 4, 5, 6, 7, 8, 9]	[45, 1]
97	[10, 1, 1]	[10]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1]	[10, 7]
98	[10, 2, 1]	[9, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 2]	[11, 6]
99	[10, 2, 2]	[8, 2]	[1, 1, 1, 1, 1, 1, 1, 1, 2, 2]	[12, 8]
100	[10, 2, 3]	[7, 3]	[1, 1, 1, 1, 1, 1, 1, 2, 2, 2]	[13, 7]
101	[10, 2, 4]	[6, 4]	[1, 1, 1, 1, 1, 1, 2, 2, 2, 2]	[14, 5]
102	[10, 2, 5]	[5, 5]	[1, 1, 1, 1, 1, 2, 2, 2, 2, 2]	[15, 7]
103	[10, 3, 1]	[8, 1, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 2, 3]	[13, 8]
104	[10, 3, 2]	[7, 2, 1]	[1, 1, 1, 1, 1, 1, 1, 2, 2, 3]	[14, 6]
105	[10, 3, 3]	[6, 3, 1]	[1, 1, 1, 1, 1, 1, 2, 2, 2, 3]	[15, 8]
106	[10, 3, 4]	[5, 4, 1]	[1, 1, 1, 1, 1, 2, 2, 2, 2, 3]	[16, 6]
107	[10, 3, 5]	[6, 2, 2]	[1, 1, 1, 1, 1, 1, 2, 2, 3, 3]	[16, 7]
108	[10, 3, 6]	[5, 3, 2]	[1, 1, 1, 1, 1, 2, 2, 2, 3, 3]	[17, 4]
109	[10, 3, 7]	[4, 4, 2]	[1, 1, 1, 1, 2, 2, 2, 2, 3, 3]	[18, 5]
110	[10, 3, 8]	[4, 3, 3]	[1, 1, 1, 1, 2, 2, 2, 3, 3, 3]	[19, 4]
111	[10, 4, 1]	[7, 1, 1, 1]	[1, 1, 1, 1, 1, 1, 1, 2, 3, 4]	[16, 8]
112	[10, 4, 2]	[6, 2, 1, 1]	[1, 1, 1, 1, 1, 1, 2, 2, 3, 4]	[17, 5]
113	[10, 4, 3]	[5, 3, 1, 1]	[1, 1, 1, 1, 1, 2, 2, 2, 3, 4]	[18, 6]
114	[10, 4, 4]	[4, 4, 1, 1]	[1, 1, 1, 1, 2, 2, 2, 2, 3, 4]	[19, 5]
115	[10, 4, 5]	[5, 2, 2, 1]	[1, 1, 1, 1, 1, 2, 2, 3, 3, 4]	[19, 6]
116	[10, 4, 6]	[4, 3, 2, 1]	[1, 1, 1, 1, 2, 2, 2, 3, 3, 4]	[20, 3]
117	[10, 4, 7]	[3, 3, 3, 1]	[1, 1, 1, 2, 2, 2, 3, 3, 3, 4]	[22, 3]
118	[10, 4, 8]	[4, 2, 2, 2]	[1, 1, 1, 1, 2, 2, 3, 3, 4, 4]	[22, 4]
119	[10, 4, 9]	[3, 3, 2, 2]	[1, 1, 1, 2, 2, 2, 3, 3, 4, 4]	[23, 2]
120	[10, 5, 1]	[6, 1, 1, 1, 1]	[1, 1, 1, 1, 1, 1, 2, 3, 4, 5]	[20, 4]
121	[10, 5, 2]	[5, 2, 1, 1, 1]	[1, 1, 1, 1, 1, 2, 2, 3, 4, 5]	[21, 5]
122	[10, 5, 3]	[4, 3, 1, 1, 1]	[1, 1, 1, 1, 2, 2, 2, 3, 4, 5]	[22, 5]
123	[10, 5, 4]	[4, 2, 2, 1, 1]	[1, 1, 1, 1, 2, 2, 3, 3, 4, 5]	[23, 3]
124	[10, 5, 5]	[3, 3, 2, 1, 1]	[1, 1, 1, 2, 2, 2, 3, 3, 4, 5]	[24, 3]
125	[10, 5, 6]	[3, 2, 2, 2, 1]	[1, 1, 1, 2, 2, 3, 3, 4, 4, 5]	[26, 1]
126	[10, 5, 7]	[2, 2, 2, 2, 2]	[1, 1, 2, 2, 3, 3, 4, 4, 5, 5]	[30, 2]
127	[10, 6, 1]	[5, 1, 1, 1, 1, 1]	[1, 1, 1, 1, 1, 2, 3, 4, 5, 6]	[25, 3]
128	[10, 6, 2]	[4, 2, 1, 1, 1, 1]	[1, 1, 1, 1, 2, 2, 3, 4, 5, 6]	[26, 2]
129	[10, 6, 3]	[3, 3, 1, 1, 1, 1]	[1, 1, 1, 2, 2, 2, 3, 4, 5, 6]	[27, 2]
130	[10, 6, 4]	[3, 2, 2, 1, 1, 1]	[1, 1, 1, 2, 2, 3, 3, 4, 5, 6]	[28, 2]
131	[10, 6, 5]	[2, 2, 2, 2, 1, 1]	[1, 1, 2, 2, 3, 3, 4, 4, 5, 6]	[31, 2]
132	[10, 7, 1]	[4, 1, 1, 1, 1, 1, 1]	[1, 1, 1, 1, 2, 3, 4, 5, 6, 7]	[31, 3]
133	[10, 7, 2]	[3, 2, 1, 1, 1, 1, 1]	[1, 1, 1, 2, 2, 3, 4, 5, 6, 7]	[32, 1]
134	[10, 7, 3]	[2, 2, 2, 1, 1, 1, 1]	[1, 1, 2, 2, 3, 3, 4, 5, 6, 7]	[34, 1]
cont'd				

Table (cont'd): Multiset representatives in A-St order. See the text for details.

k	[n, m, j]	mss = partrev	msr	[N, l]
135	[10, 8, 1]	[3, 1, 1, 1, 1, 1, 1, 1]	[1, 1, 1, 2, 3, 4, 5, 6, 7, 8]	[38, 1]
136	[10, 8, 2]	[2, 2, 1, 1, 1, 1, 1, 1]	[1, 1, 2, 2, 3, 4, 5, 6, 7, 8]	[39, 1]
137	[10, 9, 1]	[2, 1, 1, 1, 1, 1, 1, 1, 1]	[1, 1, 2, 3, 4, 5, 6, 7, 8, 9]	[46, 1]
138	[10, 10, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1]	[1, 2, 3, 4, 5, 6, 7, 8, 9, 10]	[55, 1]
139	[11, 1, 1]	[11]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1]	[11, 7]
140	[11, 2, 1]	[10, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2]	[12, 9]
141	[11, 2, 2]	[9, 2]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2]	[13, 9]
142	[11, 2, 3]	[8, 3]	[1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2]	[14, 7]
143	[11, 2, 4]	[7, 4]	[1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2]	[15, 9]
144	[11, 2, 5]	[6, 5]	[1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 2]	[16, 9]
145	[11, 3, 1]	[9, 1, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 3]	[14, 8]
146	[11, 3, 2]	[8, 2, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 3]	[15, 10]
147	[11, 3, 3]	[7, 3, 1]	[1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 3]	[16, 10]
148	[11, 3, 4]	[6, 4, 1]	[1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 3]	[17, 6]
149	[11, 3, 5]	[5, 5, 1]	[1, 1, 1, 1, 1, 2, 2, 2, 2, 2, 3]	[18, 7]
150	[11, 3, 6]	[7, 2, 2]	[1, 1, 1, 1, 1, 1, 1, 2, 2, 3, 3]	[17, 7]
151	[11, 3, 7]	[6, 3, 2]	[1, 1, 1, 1, 1, 1, 2, 2, 2, 3, 3]	[18, 8]
152	[11, 3, 8]	[5, 4, 2]	[1, 1, 1, 1, 1, 2, 2, 2, 2, 3, 3]	[19, 7]
153	[11, 3, 9]	[5, 3, 3]	[1, 1, 1, 1, 1, 2, 2, 2, 3, 3, 3]	[20, 5]
154	[11, 3, 10]	[4, 4, 3]	[1, 1, 1, 1, 2, 2, 2, 2, 3, 3, 3]	[21, 6]
155	[11, 4, 1]	[8, 1, 1, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 2, 3, 4]	[17, 8]
156	[11, 4, 2]	[7, 2, 1, 1]	[1, 1, 1, 1, 1, 1, 1, 2, 2, 3, 4]	[18, 9]
157	[11, 4, 3]	[6, 3, 1, 1]	[1, 1, 1, 1, 1, 1, 2, 2, 2, 3, 4]	[19, 8]
158	[11, 4, 4]	[5, 4, 1, 1]	[1, 1, 1, 1, 1, 2, 2, 2, 2, 3, 4]	[20, 6]
159	[11, 4, 5]	[6, 2, 2, 1]	[1, 1, 1, 1, 1, 1, 2, 2, 3, 3, 4]	[20, 7]
160	[11, 4, 6]	[5, 3, 2, 1]	[1, 1, 1, 1, 1, 2, 2, 2, 3, 3, 4]	[21, 7]
161	[11, 4, 7]	[4, 4, 2, 1]	[1, 1, 1, 1, 2, 2, 2, 2, 3, 3, 4]	[22, 6]
162	[11, 4, 8]	[4, 3, 3, 1]	[1, 1, 1, 1, 2, 2, 2, 3, 3, 3, 4]	[23, 4]
163	[11, 4, 9]	[5, 2, 2, 2]	[1, 1, 1, 1, 1, 2, 2, 3, 3, 4, 4]	[23, 5]
164	[11, 4, 10]	[4, 3, 2, 2]	[1, 1, 1, 1, 2, 2, 2, 3, 3, 4, 4]	[24, 4]
165	[11, 4, 11]	[3, 3, 3, 2]	[1, 1, 1, 2, 2, 2, 3, 3, 3, 4, 4]	[26, 3]
166	[11, 5, 1]	[7, 1, 1, 1, 1]	[1, 1, 1, 1, 1, 1, 1, 2, 3, 4, 5]	[21, 8]
167	[11, 5, 2]	[6, 2, 1, 1, 1]	[1, 1, 1, 1, 1, 1, 2, 2, 3, 4, 5]	[22, 7]
168	[11, 5, 3]	[5, 3, 1, 1, 1]	[1, 1, 1, 1, 1, 2, 2, 2, 3, 4, 5]	[23, 6]
169	[11, 5, 4]	[4, 4, 1, 1, 1]	[1, 1, 1, 1, 2, 2, 2, 2, 3, 4, 5]	[24, 5]
170	[11, 5, 5]	[5, 2, 2, 1, 1]	[1, 1, 1, 1, 1, 2, 2, 3, 3, 4, 5]	[24, 6]
171	[11, 5, 6]	[4, 3, 2, 1, 1]	[1, 1, 1, 1, 2, 2, 2, 3, 3, 4, 5]	[25, 4]
172	[11, 5, 7]	[3, 3, 3, 1, 1]	[1, 1, 1, 2, 2, 2, 3, 3, 3, 4, 5]	[27, 3]
173	[11, 5, 8]	[4, 2, 2, 2, 1]	[1, 1, 1, 1, 2, 2, 3, 3, 4, 4, 5]	[27, 4]
174	[11, 5, 9]	[3, 3, 2, 2, 1]	[1, 1, 1, 2, 2, 2, 3, 3, 4, 4, 5]	[28, 3]
175	[11, 5, 10]	[3, 2, 2, 2, 2]	[1, 1, 1, 2, 2, 3, 3, 4, 4, 5, 5]	[31, 4]
cont'd				

Table (cont'd): Multiset representatives in A-St order. See the text for details.

k	[n, m, j]	mss = partrev	msr	[N, l]
176	[11, 6, 1]	[6, 1, 1, 1, 1, 1]	[1, 1, 1, 1, 1, 1, 2, 3, 4, 5, 6]	[26, 4]
177	[11, 6, 2]	[5, 2, 1, 1, 1, 1]	[1, 1, 1, 1, 1, 2, 2, 3, 4, 5, 6]	[27, 5]
178	[11, 6, 3]	[4, 3, 1, 1, 1, 1]	[1, 1, 1, 1, 2, 2, 2, 3, 4, 5, 6]	[28, 4]
179	[11, 6, 4]	[4, 2, 2, 1, 1, 1]	[1, 1, 1, 1, 2, 2, 3, 3, 4, 5, 6]	[29, 2]
180	[11, 6, 5]	[3, 3, 2, 1, 1, 1]	[1, 1, 1, 2, 2, 2, 3, 3, 4, 5, 6]	[30, 3]
181	[11, 6, 6]	[3, 2, 2, 2, 1, 1]	[1, 1, 1, 2, 2, 3, 3, 4, 4, 5, 6]	[32, 2]
182	[11, 6, 7]	[2, 2, 2, 2, 2, 1]	[1, 1, 2, 2, 3, 3, 4, 4, 5, 5, 6]	[36, 2]
183	[11, 7, 1]	[5, 1, 1, 1, 1, 1, 1]	[1, 1, 1, 1, 1, 2, 3, 4, 5, 6, 7]	[32, 3]
184	[11, 7, 2]	[4, 2, 1, 1, 1, 1, 1]	[1, 1, 1, 1, 2, 2, 3, 4, 5, 6, 7]	[33, 1]
185	[11, 7, 3]	[3, 3, 1, 1, 1, 1, 1]	[1, 1, 1, 2, 2, 2, 3, 4, 5, 6, 7]	[34, 2]
186	[11, 7, 4]	[3, 2, 2, 1, 1, 1, 1]	[1, 1, 1, 2, 2, 3, 3, 4, 5, 6, 7]	[35, 1]
187	[11, 7, 5]	[2, 2, 2, 2, 1, 1, 1]	[1, 1, 2, 2, 3, 3, 4, 4, 5, 6, 7]	[38, 2]
188	[11, 8, 1]	[4, 1, 1, 1, 1, 1, 1, 1]	[1, 1, 1, 1, 2, 3, 4, 5, 6, 7, 8]	[39, 2]
189	[11, 8, 2]	[3, 2, 1, 1, 1, 1, 1, 1]	[1, 1, 1, 2, 2, 3, 4, 5, 6, 7, 8]	[40, 1]
190	[11, 8, 3]	[2, 2, 2, 1, 1, 1, 1, 1]	[1, 1, 2, 2, 3, 3, 4, 5, 6, 7, 8]	[42, 1]
191	[11, 9, 1]	[3, 1, 1, 1, 1, 1, 1, 1, 1]	[1, 1, 1, 2, 3, 4, 5, 6, 7, 8, 9]	[47, 1]
192	[11, 9, 2]	[2, 2, 1, 1, 1, 1, 1, 1, 1]	[1, 1, 2, 2, 3, 4, 5, 6, 7, 8, 9]	[48, 1]
193	[11, 10, 1]	[2, 1, 1, 1, 1, 1, 1, 1, 1, 1]	[1, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10]	[56, 1]
194	[11, 11, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1]	[1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11]	[66, 1]
...	**end of Table**	**of multiset representatives**	**for k = 1..194.**	

Table (ctnd.): Multiset representatives in A-St order. See the text for details.

q	[N, M, J]	msr	mss	k
1	[1, 1, 1]	[1]	[1]	1
2	[2, 2, 1]	[1, 1]	[2]	2
3	[3, 2, 1]	[1, 2]	[1, 1]	3
4	[3, 3, 1]	[1, 1, 1]	[3]	4
5	[4, 3, 1]	[1, 1, 2]	[2, 1]	5
6	[4, 4, 1]	[1, 1, 1, 1]	[4]	7
7	[5, 4, 1]	[1, 1, 1, 2]	[3, 1]	8
8	[5, 5, 1]	[1, 1, 1, 1, 1]	[5]	12
9	[6, 3, 2]	[1, 2, 3]	[1, 1, 1]	6
10	[6, 4, 2]	[1, 1, 2, 2]	[2, 2]	9
11	[6, 5, 1]	[1, 1, 1, 1, 2]	[4, 1]	13
12	[6, 6, 1]	[1, 1, 1, 1, 1, 1]	[6]	19
13	[7, 4, 2]	[1, 1, 2, 3]	[2, 1, 1]	10
14	[7, 5, 2]	[1, 1, 1, 2, 2]	[3, 2]	14
15	[7, 6, 1]	[1, 1, 1, 1, 1, 2]	[5, 1]	20
16	[7, 7, 1]	[1, 1, 1, 1, 1, 1, 1]	[7]	30
17	[8, 5, 2]	[1, 1, 1, 2, 3]	[3, 1, 1]	15
18	[8, 6, 2]	[1, 1, 1, 1, 2, 2]	[4, 2]	21
19	[8, 7, 1]	[1, 1, 1, 1, 1, 1, 2]	[6, 1]	31
20	[8, 8, 1]	[1, 1, 1, 1, 1, 1, 1, 1]	[8]	45
21	[9, 5, 4]	[1, 1, 2, 2, 3]	[2, 2, 1]	16
22	[9, 6, 2]	[1, 1, 1, 1, 2, 3]	[4, 1, 1]	23
23	[9, 6, 3]	[1, 1, 1, 2, 2, 2]	[3, 3]	22
24	[9, 7, 2]	[1, 1, 1, 1, 1, 2, 2]	[5, 2]	32
25	[9, 8, 1]	[1, 1, 1, 1, 1, 1, 1, 2]	[7, 1]	46
26	[9, 9, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1]	[9]	67
27	[10, 4, 6]	[1, 2, 3, 4]	[1, 1, 1, 1]	11
28	[10, 6, 4]	[1, 1, 1, 2, 2, 3]	[3, 2, 1]	24
29	[10, 7, 2]	[1, 1, 1, 1, 1, 2, 3]	[5, 1, 1]	34
30	[10, 7, 3]	[1, 1, 1, 1, 2, 2, 2]	[4, 3]	33
31	[10, 8, 2]	[1, 1, 1, 1, 1, 1, 2, 2]	[6, 2]	47
32	[10, 9, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 2]	[8, 1]	68
33	[10, 10, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1]	[10]	97
34	[11, 5, 6]	[1, 1, 2, 3, 4]	[2, 1, 1, 1]	17
35	[11, 7, 4]	[1, 1, 1, 1, 2, 2, 3]	[4, 2, 1]	35
36	[11, 8, 2]	[1, 1, 1, 1, 1, 1, 2, 3]	[6, 1, 1]	50
37	[11, 8, 3]	[1, 1, 1, 1, 1, 2, 2, 2]	[5, 3]	48
38	[11, 9, 2]	[1, 1, 1, 1, 1, 1, 1, 2, 2]	[7, 2]	69
39	[11, 10, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 2]	[9, 1]	98
40	[11, 11, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1]	[11]	139
cont'd				

Table: Partitions in A-St order which are multiset representatives. See the text for details.

q	[N, M, J]	msr	mss	k
41	[12, 6, 6]	[1, 1, 1, 2, 3, 4]	[3, 1, 1, 1]	26
42	[12, 6, 9]	[1, 1, 2, 2, 3, 3]	[2, 2, 2]	25
43	[12, 7, 6]	[1, 1, 1, 2, 2, 2, 3]	[3, 3, 1]	36
44	[12, 8, 4]	[1, 1, 1, 1, 1, 2, 2, 3]	[5, 2, 1]	51
45	[12, 8, 5]	[1, 1, 1, 1, 2, 2, 2, 2]	[4, 4]	49
46	[12, 9, 2]	[1, 1, 1, 1, 1, 1, 1, 2, 3]	[7, 1, 1]	72
47	[12, 9, 3]	[1, 1, 1, 1, 1, 1, 2, 2, 2]	[6, 3]	70
48	[12, 10, 2]	[1, 1, 1, 1, 1, 1, 1, 1, 2, 2]	[8, 2]	99
49	[12, 11, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2]	[10, 1]	140
50	[12, 12, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1]	[12]	195
51	[13, 6, 10]	[1, 1, 2, 2, 3, 4]	[2, 2, 1, 1]	27
52	[13, 7, 6]	[1, 1, 1, 1, 2, 3, 4]	[4, 1, 1, 1]	38
53	[13, 7, 9]	[1, 1, 1, 2, 2, 3, 3]	[3, 2, 2]	37
54	[13, 8, 6]	[1, 1, 1, 1, 2, 2, 2, 3]	[4, 3, 1]	52
55	[13, 9, 4]	[1, 1, 1, 1, 1, 1, 2, 2, 3]	[6, 2, 1]	73
56	[13, 9, 5]	[1, 1, 1, 1, 1, 2, 2, 2, 2]	[5, 4]	71
57	[13, 10, 2]	[1, 1, 1, 1, 1, 1, 1, 1, 2, 3]	[8, 1, 1]	103
58	[13, 10, 3]	[1, 1, 1, 1, 1, 1, 1, 2, 2, 2]	[7, 3]	100
59	[13, 11, 2]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2]	[9, 2]	141
60	[13, 12, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2]	[11, 1]	196
61	[13, 13, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1]	[13]	272
62	[14, 7, 10]	[1, 1, 1, 2, 2, 3, 4]	[3, 2, 1, 1]	39
63	[14, 8, 6]	[1, 1, 1, 1, 1, 2, 3, 4]	[5, 1, 1, 1]	55
64	[14, 8, 9]	[1, 1, 1, 1, 2, 2, 3, 3]	[4, 2, 2]	53
65	[14, 9, 6]	[1, 1, 1, 1, 1, 2, 2, 2, 3]	[5, 3, 1]	74
66	[14, 10, 4]	[1, 1, 1, 1, 1, 1, 1, 2, 2, 3]	[7, 2, 1]	104
67	[14, 10, 5]	[1, 1, 1, 1, 1, 1, 2, 2, 2, 2]	[6, 4]	101
68	[14, 11, 2]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 3]	[9, 1, 1]	145
69	[14, 11, 3]	[1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2]	[8, 3]	142
70	[14, 12, 2]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2]	[10, 2]	197
71	[14, 13, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2]	[12, 1]	273
72	[14, 14, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1]	[14]	373
73	[15, 5, 20]	[1, 2, 3, 4, 5]	[1, 1, 1, 1, 1]	18
74	[15, 8, 10]	[1, 1, 1, 1, 2, 2, 3, 4]	[4, 2, 1, 1]	56
75	[15, 8, 13]	[1, 1, 1, 2, 2, 2, 3, 3]	[3, 3, 2]	54
76	[15, 9, 6]	[1, 1, 1, 1, 1, 1, 2, 3, 4]	[6, 1, 1, 1]	79
77	[15, 9, 9]	[1, 1, 1, 1, 1, 2, 2, 3, 3]	[5, 2, 2]	76
78	[15, 9, 10]	[1, 1, 1, 1, 2, 2, 2, 2, 3]	[4, 4, 1]	75
79	[15, 10, 6]	[1, 1, 1, 1, 1, 1, 2, 2, 2, 3]	[6, 3, 1]	105
80	[15, 10, 7]	[1, 1, 1, 1, 1, 2, 2, 2, 2, 2]	[5, 5]	102
81	[15, 11, 4]	[1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 3]	[8, 2, 1]	146
82	[15, 11, 5]	[1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2]	[7, 4]	143
83	[15, 12, 2]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 3]	[10, 1, 1]	202
84	[15, 12, 3]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2]	[9, 3]	198
cont'd				

Table (cont'd): Partitions in A-St order which are multiset representatives. See the text for details.

q	[N, M, J]	msr	mss	k
85	[15, 13, 2]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2]	[11, 2]	274
86	[15, 14, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2]	[13, 1]	374
87	[15, 15, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1]	[15]	508
88	[16, 6, 20]	[1, 1, 2, 3, 4, 5]	[2, 1, 1, 1, 1]	28
89	[16, 7, 22]	[1, 1, 2, 2, 3, 3, 4]	[2, 2, 2, 1]	40
90	[16, 8, 17]	[1, 1, 1, 2, 2, 2, 3, 4]	[3, 3, 1, 1]	57
91	[16, 9, 10]	[1, 1, 1, 1, 1, 2, 2, 3, 4]	[5, 2, 1, 1]	80
92	[16, 9, 13]	[1, 1, 1, 1, 2, 2, 2, 3, 3]	[4, 3, 2]	77
93	[16, 10, 6]	[1, 1, 1, 1, 1, 1, 1, 2, 3, 4]	[7, 1, 1, 1]	111
94	[16, 10, 9]	[1, 1, 1, 1, 1, 1, 2, 2, 3, 3]	[6, 2, 2]	107
95	[16, 10, 10]	[1, 1, 1, 1, 1, 2, 2, 2, 2, 3]	[5, 4, 1]	106
96	[16, 11, 6]	[1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 3]	[7, 3, 1]	147
97	[16, 11, 7]	[1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 2]	[6, 5]	144
98	[16, 12, 4]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 3]	[9, 2, 1]	203
99	[16, 12, 5]	[1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2]	[8, 4]	199
100	[16, 13, 2]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 3]	[11, 1, 1]	279
101	[16, 13, 3]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2]	[10, 3]	275
102	[16, 14, 2]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2]	[12, 2]	375
103	[16, 15, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2]	[14, 1]	509
104	[16, 16, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1]	[16]	684
105	[17, 7, 20]	[1, 1, 1, 2, 3, 4, 5]	[3, 1, 1, 1, 1]	41
106	[17, 8, 22]	[1, 1, 1, 2, 2, 3, 3, 4]	[3, 2, 2, 1]	58
107	[17, 9, 17]	[1, 1, 1, 1, 2, 2, 2, 3, 4]	[4, 3, 1, 1]	81
108	[17, 10, 10]	[1, 1, 1, 1, 1, 1, 2, 2, 3, 4]	[6, 2, 1, 1]	112
109	[17, 10, 13]	[1, 1, 1, 1, 1, 2, 2, 2, 3, 3]	[5, 3, 2]	108
110	[17, 11, 6]	[1, 1, 1, 1, 1, 1, 1, 1, 2, 3, 4]	[8, 1, 1, 1]	155
111	[17, 11, 9]	[1, 1, 1, 1, 1, 1, 1, 2, 2, 3, 3]	[7, 2, 2]	150
112	[17, 11, 10]	[1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 3]	[6, 4, 1]	148
113	[17, 12, 6]	[1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 3]	[8, 3, 1]	204
114	[17, 12, 7]	[1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 2]	[7, 5]	200
115	[17, 13, 4]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 3]	[10, 2, 1]	280
116	[17, 13, 5]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2]	[9, 4]	276
117	[17, 14, 2]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 3]	[12, 1, 1]	381
118	[17, 14, 3]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2]	[11, 3]	376
119	[17, 15, 2]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2]	[13, 2]	510
120	[17, 16, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2]	[15, 1]	685
121	[17, 17, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1]	[17]	915
122	[18, 7, 33]	[1, 1, 2, 2, 3, 4, 5]	[2, 2, 1, 1, 1]	42
123	[18, 8, 20]	[1, 1, 1, 1, 2, 3, 4, 5]	[4, 1, 1, 1, 1]	60
124	[18, 9, 22]	[1, 1, 1, 1, 2, 2, 3, 3, 4]	[4, 2, 2, 1]	82
125	[18, 9, 26]	[1, 1, 1, 2, 2, 2, 3, 3, 3]	[3, 3, 3]	78
126	[18, 10, 17]	[1, 1, 1, 1, 1, 2, 2, 2, 3, 4]	[5, 3, 1, 1]	113
127	[18, 10, 20]	[1, 1, 1, 1, 2, 2, 2, 2, 3, 3]	[4, 4, 2]	109
cont'd				

Table (cont'd) : Partitions in A-St order which are multiset representatives. See the text for details.

q	[N, M, J]	msr	mss	k
128	[18, 11, 10]	[1, 1, 1, 1, 1, 1, 1, 2, 2, 3, 4]	[7, 2, 1, 1]	156
129	[18, 11, 13]	[1, 1, 1, 1, 1, 1, 2, 2, 2, 3, 3]	[6, 3, 2]	151
130	[18, 11, 14]	[1, 1, 1, 1, 1, 2, 2, 2, 2, 2, 3]	[5, 5, 1]	149
131	[18, 12, 6]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 3, 4]	[9, 1, 1, 1]	214
132	[18, 12, 9]	[1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 3, 3]	[8, 2, 2]	207
133	[18, 12, 10]	[1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 3]	[7, 4, 1]	205
134	[18, 12, 11]	[1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 2, 2]	[6, 6]	201
135	[18, 13, 6]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 3]	[9, 3, 1]	281
136	[18, 13, 7]	[1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 2]	[8, 5]	277
137	[18, 14, 4]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 3]	[11, 2, 1]	382
138	[18, 14, 5]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2]	[10, 4]	377
139	[18, 15, 2]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 3]	[13, 1, 1]	516
140	[18, 15, 3]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2]	[12, 3]	511
141	[18, 16, 2]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2]	[14, 2]	686
142	[18, 17, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2]	[16, 1]	916
143	[18, 18, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1]	[18]	1212
144	[19, 8, 33]	[1, 1, 1, 2, 2, 3, 4, 5]	[3, 2, 1, 1, 1]	61
145	[19, 9, 20]	[1, 1, 1, 1, 1, 2, 3, 4, 5]	[5, 1, 1, 1, 1]	85
146	[19, 9, 34]	[1, 1, 1, 2, 2, 2, 3, 3, 4]	[3, 3, 2, 1]	83
147	[19, 10, 22]	[1, 1, 1, 1, 1, 2, 2, 3, 3, 4]	[5, 2, 2, 1]	115
148	[19, 10, 25]	[1, 1, 1, 1, 2, 2, 2, 2, 3, 4]	[4, 4, 1, 1]	114
149	[19, 10, 26]	[1, 1, 1, 1, 2, 2, 2, 3, 3, 3]	[4, 3, 3]	110
150	[19, 11, 17]	[1, 1, 1, 1, 1, 1, 2, 2, 2, 3, 4]	[6, 3, 1, 1]	157
151	[19, 11, 20]	[1, 1, 1, 1, 1, 2, 2, 2, 2, 3, 3]	[5, 4, 2]	152
152	[19, 12, 10]	[1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 3, 4]	[8, 2, 1, 1]	215
153	[19, 12, 13]	[1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 3, 3]	[7, 3, 2] 208	208
154	[19, 12, 14]	[1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 2, 3]	[6, 5, 1]	206
155	[19, 13, 6]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 3, 4]	[10, 1, 1, 1]	293
156	[19, 13, 9]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 3, 3]	[9, 2, 2]	285
157	[19, 13, 10]	[1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 3]	[8, 4, 1]	282
158	[19, 13, 11]	[1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 2, 2]	[7, 6]	278
159	[19, 14, 6]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 3]	[10, 3, 1]	383
160	[19, 14, 7]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 2]	[9, 5]	378
161	[19, 15, 4]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 3]	[12, 2, 1]	517
162	[19, 15, 5]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2]	[11, 4]	512
163	[19, 16, 2]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 3]	[14, 1, 1]	693
164	[19, 16, 3]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2]	[13, 3]	687
165	[19, 17, 2]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2]	[15, 2]	917
166	[19, 18, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2]	[17, 1]	1213
167	[19, 19, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1]	[19]	1597
cont'd				

Table (cont'd) : Partitions in A-St order which are multiset representatives. See the text for details.

q	[N, M, J]	msr	mss	k
168	[20, 8, 56]	[1, 1, 2, 2, 3, 3, 4, 4]	[2, 2, 2, 2]	59
169	[20, 9, 33]	[1, 1, 1, 1, 2, 2, 3, 4, 5]	[4, 2, 1, 1, 1]	86
170	[20, 10, 20]	[1, 1, 1, 1, 1, 1, 2, 3, 4, 5]	[6, 1, 1, 1, 1]	120
171	[20, 10, 34]	[1, 1, 1, 1, 2, 2, 2, 3, 3, 4]	[4, 3, 2, 1]	116
172	[20, 11, 22]	[1, 1, 1, 1, 1, 1, 2, 2, 3, 3, 4]	[6, 2, 2, 1]	159
173	[20, 11, 25]	[1, 1, 1, 1, 1, 2, 2, 2, 2, 3, 4]	[5, 4, 1, 1]	158
174	[20, 11, 26]	[1, 1, 1, 1, 1, 2, 2, 2, 3, 3, 3]	[5, 3, 3]	153
175	[20, 12, 17]	[1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 3, 4]	[7, 3, 1, 1]	216
176	[20, 12, 20]	[1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 3, 3]	[6, 4, 2]	209
177	[20, 13, 10]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 3, 4]	[9, 2, 1, 1]	294
178	[20, 13, 13]	[1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 3, 3]	[8, 3, 2]	286
179	[20, 13, 14]	[1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 2, 3]	[7, 5, 1]	283
180	[20, 14, 6]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 3, 4]	[11, 1, 1, 1]	397
181	[20, 14, 9]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 3, 3]	[10, 2, 2]	387
182	[20, 14, 10]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 3]	[9, 4, 1]	384
183	[20, 14, 11]	[1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 2, 2]	[8, 6]	379
184	[20, 15, 6]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 3]	[11, 3, 1]	518
185	[20, 15, 7]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 2]	[10, 5]	513
186	[20, 16, 4]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 3]	[13, 2, 1]	694
187	[20, 16, 5]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2]	[12, 4]	688
188	[20, 17, 2]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 3]	[15, 1, 1]	924
189	[20, 17, 3]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2]	[14, 3]	918
190	[20, 18, 2]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2]	[16, 2]	1214
191	[20, 19, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2]	[18, 1]	1598
192	[20, 20, 1]	[1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1]	[20]	2087
end	**of Table**	**for** $q = 1..182$ **from** $N = 1..20$		

Table (cont'd) : Partitions in A-St order which are multiset representatives. See the text for details.

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