Changes in the GAP Library of Tables of Marks

This list contains the changes in the GAP Library of Tables of Marks since the release of TomLib 1.0 (together with GAP 4.3) in May 2002. We denote mathematical errors by ******* and new information by **NEW**. We use **C** to denote changes that are not obviously corrections; the number of these changes is kept small.

Release of TomLib 1.1.1 (December 2003)

Changes are assigned to the simple group involved, and shown in alphabetical order.

*** $^3D_4(2)$: The derived subgroups for the classes 2847 and 2848 were corrected, they are in the classes 2823 and 2827, respectively (not 2847 and 2848) .

*** : The derived subgroups for the last classes in the maximal subgroups $S_3 \times L_2(8)$ and $(7 \times L_2(7)) : 3$ were corrected, they are in the last but one class not in the last .

*** Co_3 : The derived subgroups for the classes 2018, 2318, and 2457 in Co_3 were corrected, they are in the classes 1435, 2048, and 2442, respectively (not 2018, 2318, and 2457) .

*** : The derived subgroups for the last classes in the maximal subgroups $2 \times M_{12}$, $S_3 \times L_2(8) : 3$, and $A_4 \times S_5$ were corrected, they are in the classes 514, 139, and 138, respectively (not 515, 144, and 146) .

*** $L_3(4)$: The derived subgroups for the class 199 in $3.L_3(4).2_3$ were corrected, they are in the class 198 not 199 .

*** : The generators for the representative of the class 706 in $2^2.L_3(4).2_2$ were replaced; the former generators belonged to a group in class 705 .

*** $O_8^-(2)$: The straight line programs were corrected; up to now, the corresponding data stored in the table did not describe valid straight line programs .

*** : The derived subgroups for the last class in the maximal subgroup $(S_3 \times S_3 \times A_5) : 2$ of $O_8^-(2)$ were corrected, they are in the class 362 not 368 .

*** $U_3(4)$: The derived subgroups for the class 80 in $U_3(4).2$ were corrected, they are in the class 79 not 80 .

*** $U_4(2)$: The generators for the representative of the class 110 in the maximal subgroup $2.(A_4 \times A_4).2.2$ of $U_4(2).2$ were replaced; the former generators belonged to a group of order 24 not 12, which was conjugate to the representative of class 152 .

*** $U_4(3)$: The generators for the representatives of the classes 575 and 595 in $U_4(3).2_1$ were replaced; the former generators belonged to groups of order 192 not 96, which were conjugate to the representative of class 709 .

Release of TomLib 1.1.2 (February 2004)

Changes are assigned to the simple group involved, and shown in alphabetical order.

*** $O_8^-(2)$: The derived subgroups for the class 5269 were corrected, they are in the class 5108 not 5269 .

*** : The fusion from the table of marks of the maximal subgroup $(A_8 \times 3) : 2$ was corrected .

Release of TomLib 1.1.3 (September 2007)

Changes are assigned to the simple group involved, and shown in alphabetical order.

NEW A_{12} : The table of marks of S_{12} was added .
NEW A_{13} : The table of marks of A_{13} was added .

Release of TomLib 1.1.4 (November 2008)

Changes are assigned to the simple group involved, and shown in alphabetical order.

*** A_{12} : The underlying group of the table of marks of S_{12} was in fact S_{13}, acting on 13 points; moreover, it had the group order of S_{12} stored .

Release of TomLib 1.2.1 (April 2011)

Changes are assigned to the simple group involved, and shown in alphabetical order.

NEW A_{13} : The table of marks of S_{13} and the fusion map into it from A_{13} was added .
NEW HS : The table of marks of $HS.2$ and the fusion map into it from HS was added .
NEW He : The table of marks of $He.2$ and the fusion map into it from He was added .
NEW $Sz(8)$: The table of marks of $Sz(8).3$ and the fusion map into it from $Sz(8)$ was added .
NEW $^2F_4(2)'$: The table of marks of $^2F_4(2)$ and the fusion map into it from $^2F_4(2)'$ was added .

Release of TomLib 1.2.2 (September 2011)

Changes are assigned to the simple group involved, and shown in alphabetical order. The following standard generators were added/corrected.

*** $2.A5$: generator orders are [3, 4] not [4, 3], the compatibility flag is "N" not "Y" .
*** $2.A6$: the product of the generators has order 5 not 10 .
*** $2.S6$: generator orders are [4, 5] not [2, 5], .
*** $L2(8).3$: generator orders are [2, 6] not [2, 3], therefore the compatibility flag is "N" not "Y" .
*** $L2(11).2$: compatibility flag is "Y" not "N" .
*** $L2(13).2$: generator orders are [2, 14] not [2, 3] .
NEW $3.S7$: new info record added .
*** $L2(25).2_2$: generator orders are [3, 10] not [4, 12], additional conditions are $|cd| = 4, |cdd| = 4$.
*** $L3(4).2_2$: generator orders are [2, 4] not [2, 5], the compatibility flag is "N" not "Y", additional conditions are $|C(f)| = 16, |ef| = 14$.
*** $L3(4).D12$: generator orders are [10, 14] not [2, 12], additional conditions are $|tu| = 12, |tuu| = 8, |tu^3| = 6, |ttu^3| = 8, |tutuu| = 6, |tutuutu^3| = 6$.
*** $2^2.L3(4)$: generator orders are [2, 4] not [2, 10], additional conditions are $|EF| = 7, |EFF| = 5$.
*** $L2(37)$: the product of the generators has order 37 not 31, the compatibility flag is "Y" not "N" .
*** $U4(2).2$: compatibility flag is "Y" not "N" .
*** $2.U4(2).2$: compatibility flag is "Y" not "N" .
NEW $Sz(8) : 3$: new info record added .
NEW $L2(32).5$: new info record added .
*** $L2(41)$: compatibility flag is "Y" not "N" .
*** $L2(43)$: compatibility flag is "Y" not "N" .
*** $L2(47)$: compatibility flag is "Y" not "N" .
*** $L2(49)$: the product of the generators has order 25 not 47 .
*** $L2(53)$: compatibility flag is "Y" not "N" .
*** $L2(59)$: compatibility flag is "Y" not "N" .
*** $L2(61)$: compatibility flag is "Y" not "N" .
NEW $U3(5).3$: had been commented out, note that —C(f)—=36 not 24 .
*** $U3(5).S3$: generator orders are [20, 3] not [3, 12], additional conditions are $|gh| = 6, |ghh| = 8, |ggh| = 24, |g^3h| = 10, |hhghgg| = 20$.

Release of TomLib 1.2.4 (November 2013)

Changes are assigned to the simple group involved, and shown in alphabetical order. The following standard generators were added/corrected.

***	$L2(67)$	: compatibility flag is "Y" not "N" .
***	$L2(71)$	: compatibility flag is "Y" not "N" .
***	$S9$	: compatibility flag is "Y" not "N" .
***	$L2(73)$	: compatibility flag is "Y" not "N" .
***	$L2(79)$	: compatibility flag is "Y" not "N" .
***	$L2(64)$	: compatibility flag is "Y" not "N" .
***	$L2(81)$	: the product of the generators has order 41 not 10 .
***	$L2(83)$	: compatibility flag is "Y" not "N" .
***	$L2(89)$	: compatibility flag is "Y" not "N" .
***	$L3(5)$	: generator orders are [3, 5] not [5, 3] .
***	$L2(97)$	: compatibility flag is "Y" not "N" .
***	$L2(101)$	: compatibility flag is "Y" not "N" .
***	$L2(103)$	: compatibility flag is "Y" not "N" .
***	$J2.2$	: generator orders are [2, 5] not [7, 5] .
***	$L2(107)$	: compatibility flag is "Y" not "N" .
***	$L2(109)$	: compatibility flag is "Y" not "N" .
***	$L2(113)$	: compatibility flag is "Y" not "N" .
***	$S4(4)$	: the second generator has centralizer of order 25 not 15 .
NEW	$U4(3).2_1^2 33$	: had been commented out .
***	$G2(3).2$	: generator orders are [2, 13] not [7, 13] .
***	$L4(3)$	: generator orders are [2, 13] not [2, 4] the compatibility flag is "N" not "Y" .
NEW	$2F4(2)$	: New info record added .
***	$Sz(32)$	: the element $(ab)^3(bab)^2 bbabb$ has order 41 not 25 .
NEW	$HS.2$	: new info record added .
***	$J3$	: the element $ababb$ has order 9 not 19 .
NEW	$O8 + (2)$	: had been commented out .
NEW	$S12$	: new info record added .
***	$M24$	: the last condition is $|(ab)^3(ba)^2 bbabb| = 4$ not $|(ab)^3(bab)^2 bbabb| = 4$.
****	$G2(4)$	: compatibility flag is "Y" not "N" .
NEW	$A13$	: new info record added .
NEW	$S13$	: new info record added .
NEW	$He.2$	: new info record added .

Last update November 10th, 2013.