The group G is isomorphic to the group labelled by $[\ 31,\ 1\]$ in the Small Groups library. Ordinary character table of $G\cong \mathrm{C}31$:

10	31a	31b	31c	31d	31e	31f	31g	31h	31i	31j	31k	31l	31m	31n	310	31p	31q	31r	31s	31t	31u	31v	31w	31x	31y	31z	31aa	31ab	31ac	31ad
χ_1 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
χ_2 1	E(31)	$E(31)^2$	$E(31)^{3}$	$E(31)^4$	$E(31)^{5}$	$E(31)^{6}$	$E(31)^{7}$	$E(31)^{8}$	$E(31)^9$	$E(31)^{10}$	$E(31)^{11}$	$E(31)^{12}$	$E(31)^{13}$	$E(31)^{14}$	$E(31)^{15}$	$E(31)^{16}$	$E(31)^{17}$	$E(31)^{18}$	$E(31)^{19}$	$E(31)^{20}$	$E(31)^{21}$	$E(31)^{22}$	$E(31)^{23}$	$E(31)^{24}$	$E(31)^{25}$	$E(31)^{26}$	$E(31)^{27}$	$E(31)^{28}$	$E(31)^{29}$	$E(31)^{30}$
χ_3 1	$E(31)^2$	$E(31)^4$	$E(31)^{6}$	$E(31)^{8}$	$E(31)^{10}$	$E(31)^{12}$	$E(31)^{14}$	$E(31)^{16}$	$E(31)^{18}$	$E(31)^{20}$	$E(31)^{22}$	$E(31)^{24}$	$E(31)^{26}$	$E(31)^{28}$	$E(31)^{30}$	E(31)	$E(31)^3$	$E(31)^5$	$E(31)^{7}$	$E(31)^9$	$E(31)^{11}$	$E(31)^{13}$	$E(31)^{15}$	$E(31)^{17}$	$E(31)^{19}$	$E(31)^{21}$	$E(31)^{23}$	$E(31)^{25}$	$E(31)^{27}$	$E(31)^{29}$
χ_4 1	$E(31)^3$	$E(31)^{6}$	$E(31)^9$	$E(31)^{12}$	$E(31)^{15}$	$E(31)^{18}$	$E(31)^{21}$	$E(31)^{24}$	$E(31)^{27}$	$E(31)^{30}$	$E(31)^2$	$E(31)^5$	$E(31)^{8}$	$E(31)^{11}$	$E(31)^{14}$	$E(31)^{17}$	$E(31)^{20}$	$E(31)^{23}$	$E(31)^{26}$	$E(31)^{29}$	E(31)	$E(31)^4$	$E(31)^{7}$	$E(31)^{10}$	$E(31)^{13}$	$E(31)^{16}$	$E(31)^{19}$	$E(31)^{22}$	$E(31)^{25}$	$E(31)^{28}$
χ_5 1	$E(31)^4$	$E(31)^{8}$	$E(31)^{12}$	$E(31)^{16}$	$E(31)^{20}$	$E(31)^{24}$	$E(31)^{28}$	E(31)	$E(31)^5$	$E(31)^9$	$E(31)^{13}$	$E(31)^{17}$	$E(31)^{21}$	$E(31)^{25}$	$E(31)^{29}$	$E(31)^2$	$E(31)^6$	$E(31)^{10}$	$E(31)^{14}$	$E(31)^{18}$	$E(31)^{22}$	$E(31)^{26}$	$E(31)^{30}$	$E(31)^3$	$E(31)^{7}$	$E(31)^{11}$	$E(31)^{15}$	$E(31)^{19}$	$E(31)^{23}$	$E(31)^{27}$
χ_6 1	$E(31)^5$	$E(31)^{10}$	$E(31)^{15}$	$E(31)^{20}$	$E(31)^{25}$	$E(31)^{30}$	$E(31)^4$	$E(31)^9$	$E(31)^{14}$	$E(31)^{19}$	$E(31)^{24}$	$E(31)^{29}$	$E(31)^3$	$E(31)^8$	$E(31)^{13}$	$E(31)^{18}$	$E(31)^{23}$	$E(31)^{28}$	$E(31)^2$	$E(31)^{7}$	$E(31)^{12}$	$E(31)^{17}$	$E(31)^{22}$	$E(31)^{27}$	E(31)	$E(31)^6$	$E(31)^{11}$	$E(31)^{16}$	$E(31)^{21}$	$E(31)^{26}$
χ_7 1	$E(31)^{6}$	$E(31)^{12}$	$E(31)^{18}$	$E(31)^{24}$	$E(31)^{30}$	$E(31)^{5}$	$E(31)^{11}$	$E(31)^{17}$	$E(31)^{23}$	$E(31)^{29}$	$E(31)^4$	$E(31)^{10}$	$E(31)^{16}$	$E(31)^{22}$	$E(31)^{28}$	$E(31)^{3}$	$E(31)^9$	$E(31)^{15}$	$E(31)^{21}$	$E(31)^{27}$	$E(31)^{2}$	$E(31)^{8}$	$E(31)^{14}$	$E(31)^{20}$	$E(31)^{26}$	E(31)	$E(31)^{7}$	$E(31)^{13}$	$E(31)^{19}$	$E(31)^{25}$
χ_8 1	$E(31)^{7}$	$E(31)^{14}$	$E(31)^{21}$	$E(31)^{28}$	$E(31)^4$	$E(31)^{11}$	$E(31)^{18}$	$E(31)^{25}$	E(31)	$E(31)^{8}$	$E(31)^{15}$	$E(31)^{22}$	$E(31)^{29}$	$E(31)^5$	$E(31)^{12}$	$E(31)^{19}$	$E(31)^{26}$	$E(31)^2$	$E(31)^9$	$E(31)^{16}$	$E(31)^{23}$	$E(31)^{30}$	$E(31)^{6}$	$E(31)^{13}$	$E(31)^{20}$	$E(31)^{27}$	$E(31)^{3}$	$E(31)^{10}$	$E(31)^{17}$	$E(31)^{24}$
χ_9 1	$E(31)^{8}$	$E(31)^{16}$	$E(31)^{24}$	E(31)	$E(31)^9$	$E(31)^{17}$	$E(31)^{25}$	$E(31)^2$	$E(31)^{10}$	$E(31)^{18}$	$E(31)^{26}$	$E(31)^{3}$	$E(31)^{11}$	$E(31)^{19}$	$E(31)^{27}$	$E(31)^4$	$E(31)^{12}$	$E(31)^{20}$	$E(31)^{28}$	$E(31)^{5}$	$E(31)^{13}$	$E(31)^{21}$	$E(31)^{29}$	$E(31)^{6}$	$E(31)^{14}$	$E(31)^{22}$	$E(31)^{30}$	$E(31)^{7}$	$E(31)^{15}$	$E(31)^{23}$
χ_{10} 1	$E(31)^9$	$E(31)^{18}$	$E(31)^{27}$	$E(31)^{5}$	$E(31)^{14}$	$E(31)^{23}$	E(31)	$E(31)^{10}$	$E(31)^{19}$	$E(31)^{28}$	$E(31)^{6}$	$E(31)^{15}$	$E(31)^{24}$	$E(31)^2$	$E(31)^{11}$	$E(31)^{20}$	$E(31)^{29}$	$E(31)^{7}$	$E(31)^{16}$	$E(31)^{25}$	$E(31)^{3}$	$E(31)^{12}$	$E(31)^{21}$	$E(31)^{30}$	$E(31)^{8}$	$E(31)^{17}$	$E(31)^{26}$	$E(31)^4$	$E(31)^{13}$	$E(31)^{22}$
χ_{11} 1	$E(31)^{10}$	$E(31)^{20}$	$E(31)^{30}$	$E(31)^9$	$E(31)^{19}$	$E(31)^{29}$	$E(31)^{8}$	$E(31)^{18}$	$E(31)^{28}$	$E(31)^{7}$	$E(31)^{17}$	$E(31)^{27}$	$E(31)^{6}$	$E(31)^{16}$	$E(31)^{26}$	$E(31)^{5}$	$E(31)^{15}$	$E(31)^{25}$	$E(31)^4$	$E(31)^{14}$	$E(31)^{24}$	$E(31)^{3}$	$E(31)^{13}$	$E(31)^{23}$	$E(31)^{2}$	$E(31)^{12}$	$E(31)^{22}$	E(31)	$E(31)^{11}$	$E(31)^{21}$
χ_{12} 1	$E(31)^{11}$	$E(31)^{22}$	$E(31)^{2}$	$E(31)^{13}$	$E(31)^{24}$	$E(31)^4$	$E(31)^{15}$	$E(31)^{26}$	$E(31)^{6}$	$E(31)^{17}$	$E(31)^{28}$	$E(31)^{8}$	$E(31)^{19}$	$E(31)^{30}$	$E(31)^{10}$	$E(31)^{21}$	E(31)	$E(31)^{12}$	$E(31)^{23}$	$E(31)^{3}$	$E(31)^{14}$	$E(31)^{25}$	$E(31)^{5}$	$E(31)^{16}$	$E(31)^{27}$	$E(31)^{7}$	$E(31)^{18}$	$E(31)^{29}$	$E(31)^{9}$	$E(31)^{20}$
χ_{13} 1	$E(31)^{12}$	$E(31)^{24}$	$E(31)^{5}$	$E(31)^{17}$	$E(31)^{29}$	$E(31)^{10}$	$E(31)^{22}$	$E(31)^{3}$	$E(31)^{15}$	$E(31)^{27}$	$E(31)^{8}$	$E(31)^{20}$	E(31)	$E(31)^{13}$	$E(31)^{25}$	$E(31)^{6}$	$E(31)^{18}$	\ /	\ /	$E(31)^{23}$	$E(31)^4$	$E(31)^{16}$	$E(31)^{28}$	$E(31)^9$	$E(31)^{21}$	$E(31)^2$	$E(31)^{14}$	$E(31)^{26}$	$E(31)^{7}$	$E(31)^{19}$
χ_{14} 1	$E(31)^{13}$	$E(31)^{26}$	$E(31)^{8}$	$E(31)^{21}$	$E(31)^{3}$	$E(31)^{16}$	$E(31)^{29}$	$E(31)^{11}$	$E(31)^{24}$	$E(31)^{6}$	$E(31)^{19}$	E(31)	$E(31)^{14}$	$E(31)^{27}$	$E(31)^9$	$E(31)^{22}$	$E(31)^4$	$E(31)^{17}$	\ /	$E(31)^{12}$	$E(31)^{25}$	$E(31)^{7}$	$E(31)^{20}$	$E(31)^{2}$	$E(31)^{15}$	$E(31)^{28}$	$E(31)^{10}$	$E(31)^{23}$	$E(31)^{5}$	$E(31)^{18}$
χ_{15} 1	$E(31)^{14}$	$E(31)^{28}$	$E(31)^{11}$	$E(31)^{25}$	$E(31)^{8}$	$E(31)^{22}$	\ /	$E(31)^{19}$	$E(31)^2$	$E(31)^{16}$	$E(31)^{30}$	` /	$E(31)^{27}$	$E(31)^{10}$	$E(31)^{24}$	$E(31)^{7}$	$E(31)^{21}$	$E(31)^4$	$E(31)^{18}$	E(31)	$E(31)^{15}$	$E(31)^{29}$	$E(31)^{12}$	$E(31)^{26}$	$E(31)^9$	$E(31)^{23}$	$E(31)^{6}$	$E(31)^{20}$	$E(31)^{3}$	$E(31)^{17}$
χ_{16} 1	$E(31)^{15}$	$E(31)^{30}$	$E(31)^{14}$	$E(31)^{29}$	$E(31)^{13}$	$E(31)^{28}$	` /	$E(31)^{27}$	$E(31)^{11}$	` / _	$E(31)^{10}$	$E(31)^{25}$	$E(31)^9$	$E(31)^{24}$	$E(31)^{8}$	$E(31)^{23}$	$E(31)^{7}$	\ /	` ′	$E(31)^{21}$	$E(31)^{5}$	$E(31)^{20}$	$E(31)^4$	$E(31)^{19}$	$E(31)^3$	$E(31)^{18}$	$E(31)^{2}$	$E(31)^{17}$	E(31)	$E(31)^{16}$
χ_{17} 1	$E(31)^{16}$	E(31)	$E(31)^{17}$	$E(31)^{2}$	$E(31)^{18}$		$E(31)^{19}$	()	$E(31)^{20}$	\ /	$E(31)^{21}$		$E(31)^{22}$	` ′ ′ ′ ′ ′ ′ ′ ′ ′ ′ ′ ′ ′ ′ ′ ′ ′ ′ ′	$E(31)^{23}$	` /	$E(31)^{24}$	\ /	\ /	$E(31)^{10}$	\ / _ ~	$E(31)^{11}$	$E(31)^{27}$	$E(31)^{12}$	\ /	$E(31)^{13}$	$E(31)^{29}$	$E(31)^{14}$	$E(31)^{30}$	$E(31)^{15}$
χ_{18} 1	$E(31)^{17}$	$E(31)^{3}$	$E(31)^{20}$	$E(31)^{6}$	$E(31)^{23}$	` '			$E(31)^{29}$		E(31)	$E(31)^{18}$	$E(31)^4$	$E(31)^{21}$	$E(31)^{7}$		$E(31)^{10}$			` '	$E(31)^{16}$		$E(31)^{19}$	$E(31)^{5}$	$E(31)^{22}$	$E(31)^{8}$	$E(31)^{25}$	$E(31)^{11}$	$E(31)^{28}$	$E(31)^{14}$
$\chi_{19} \mid 1$	$E(31)^{18}$	$E(31)^{5}$	$E(31)^{23}$	$E(31)^{10}$	$E(31)^{28}$	$E(31)^{15}$		$E(31)^{20}$	$E(31)^{7}$	$E(31)^{25}$	$E(31)^{12}$	$E(31)^{30}$	$E(31)^{17}$	$E(31)^4$	$E(31)^{22}$	` ′	$E(31)^{27}$	$E(31)^{14}$	E(31)	$E(31)^{19}$	$E(31)^{6}$	$E(31)^{24}$	$E(31)^{11}$	$E(31)^{29}$	$E(31)^{16}$	$E(31)^3$	$E(31)^{21}$	$E(31)^{8}$	$E(31)^{26}$	$E(31)^{13}$
χ_{20} 1	$E(31)^{19}$	$E(31)^{7}$	$E(31)^{26}$	$E(31)^{14}$	$E(31)^{2}$	$E(31)^{21}$	\ /	$E(31)^{28}$	$E(31)^{16}$	\ /	$E(31)^{23}$		$E(31)^{30}$	$E(31)^{18}$	$E(31)^{6}$	\ /	$E(31)^{13}$	E(31)	$E(31)^{20}$	$E(31)^{8}$	$E(31)^{27}$	$E(31)^{15}$	$E(31)^3$	$E(31)^{22}$	$E(31)^{10}$	\ /	$E(31)^{17}$	$E(31)^{5}$	$E(31)^{24}$	$E(31)^{12}$
χ_{21} 1	$E(31)^{20}$	$E(31)^9$	$E(31)^{29}$		$E(31)^{7}$	$E(31)^{27}$	` /	$E(31)^5$	$E(31)^{25}$	$E(31)^{14}$		` ' '		E(31)	$E(31)^{21}$	$E(31)^{10}$	$E(31)^{30}$	\ /	\ /	$E(31)^{28}$	$E(31)^{17}$	$E(31)^{6}$	$E(31)^{26}$	$E(31)^{15}$	\ /	` ′ 10	$E(31)^{13}$.` .'00	$E(31)^{22}$	$E(31)^{11}$
χ_{22} 1	$E(31)^{21}$	$E(31)^{11}$	E(31)	$E(31)^{22}$	$E(31)^{12}$	$E(31)^{2}$	$E(31)^{23}$	$E(31)^{13}$	$E(31)^3$	$E(31)^{24}$	$E(31)^{14}$	$E(31)^4$	$E(31)^{25}$	$E(31)^{15}$	$E(31)^{5}$	$E(31)^{26}$	$E(31)^{16}$	` /	$E(31)^{27}$	` /	$E(31)^{7}$	$E(31)^{28}$	$E(31)^{18}$	$E(31)^{8}$	$E(31)^{29}$	$E(31)^{19}$	$E(31)^9$	$E(31)^{30}$	$E(31)^{20}$	$E(31)^{10}$
χ_{23} 1	$E(31)^{22}$	` ′	$E(31)^4$	$E(31)^{26}$	$E(31)^{17}$	$E(31)^8$	\ /	$E(31)^{21}$	$E(31)^{12}$	$E(31)^3$	$E(31)^{25}$	$E(31)^{16}$	$E(31)^7$	$E(31)^{29}$	$E(31)^{20}$	$E(31)^{11}$	$E(31)^2$	` /	$E(31)^{15}$	$E(31)^6$	$E(31)^{28}$	$E(31)^{19}$	$E(31)^{10}$	E(31)	$E(31)^{23}$	$E(31)^{14}$	$E(31)^{5}$	$E(31)^{27}$	$E(31)^{18}$	$\frac{E(31)^9}{E(31)^9}$
χ_{24} 1	$E(31)^{23}$	$E(31)^{15}$	$E(31)^{\gamma}$	$E(31)^{30}$	$E(31)^{22}$	\ /	` .′	$E(31)^{29}$	$E(31)^{21}$	$E(31)^{13}$	` /	`. ′. ^	$E(31)^{20}$	$E(31)^{12}$	$E(31)^4$	` /	$E(31)^{19}$	\ /	\ /	$E(31)^{26}$	$E(31)^{18}$	$E(31)^{10}$	$E(31)^2$	$E(31)^{25}$	$E(31)^{17}$	$E(31)^9$	E(31)	$E(31)^{24}$	$E(31)^{16}$	$E(31)^8$
χ_{25} 1	$E(31)^{24}$	$E(31)^{17}$	$E(31)^{10}$	$E(31)^{3}$	$E(31)^{27}$	$E(31)^{20}$	$E(31)^{13}$	$E(31)^{6}$	$E(31)^{30}$	$E(31)^{23}$	$E(31)^{16}$	$E(31)^9$	$E(31)^2$	$E(31)^{26}$	$E(31)^{19}$	$E(31)^{12}$	$E(31)^5$	\ /	` /	$E(31)^{15}$	$E(31)^8$	E(31)	$E(31)^{25}$	$E(31)^{18}$	$E(31)^{11}$	$E(31)^4$	$E(31)^{28}$	$E(31)^{21}$	$E(31)^{14}$	$E(31)^{\gamma}$
χ_{26} 1	$E(31)^{25}$	$E(31)^{19}$	$E(31)^{13}$	$E(31)^{\gamma}$	E(31)	$E(31)^{26}$		$E(31)^{14}$	$E(31)^8$	10	$E(31)^{27}$	`. ′. o	$E(31)^{15}$	$E(31)^9$	$E(31)^3$	$E(31)^{28}$	$E(31)^{22}$	\ / _	$E(31)^{10}$	$E(31)^4$	$E(31)^{29}$	$E(31)^{23}$	$E(31)^{17}$	$E(31)^{11}$	$E(31)^5$	$E(31)^{30}$	$E(31)^{24}$	$E(31)^{18}$	$E(31)^{12}$	$E(31)^{6}$
χ_{27} 1	$E(31)^{26}$	$E(31)^{21}$	$E(31)^{16}$	$E(31)^{11}$	$E(31)^{6}$	E(31)	$E(31)^{27}$	$E(31)^{22}$	$E(31)^{17}$	$E(31)^{12}$	$E(31)^{7}$	$E(31)^2$	$E(31)^{28}$	$E(31)^{23}$	$E(31)^{18}$	$E(31)^{13}$	$E(31)^{8}$	$E(31)^3$	\ / /	$E(31)^{24}$	$E(31)^{19}$	$E(31)^{14}$	$E(31)^9$	$E(31)^4$	$E(31)^{30}$	` ′ ^ ^	$E(31)^{20}$	$E(31)^{15}$	$E(31)^{10}$	$E(31)^{5}$
χ_{28} 1	$E(31)^{27}$	$E(31)^{23}$		$E(31)^{15}$	$E(31)^{11}$	$E(31)^{7}$	$E(31)^3$	$E(31)^{30}$	$E(31)^{26}$	$E(31)^{22}$	$E(31)^{18}$	$E(31)^{14}$	$E(31)^{10}$	$E(31)^{6}$	$E(31)^2$	$E(31)^{29}$	$E(31)^{25}$	$E(31)^{21}$	$E(31)^{17}$	$E(31)^{13}$	$E(31)^9$	$E(31)^5$	E(31)	$E(31)^{28}$	$E(31)^{24}$	$E(31)^{20}$	$E(31)^{16}$	$E(31)^{12}$	$E(31)^{8}$	$E(31)^4$
χ_{29} 1	$E(31)^{28}$	` ' ~ -	$E(31)^{22}$	$E(31)^{19}$	$E(31)^{16}$	$E(31)^{13}$	$E(31)^{10}$	$E(31)^{\gamma}$	$E(31)^4$	E(31)	$E(31)^{29}$	`. ´. .	$E(31)^{23}$	$E(31)^{20}$	$E(31)^{17}$	$E(31)^{14}$	$E(31)^{11}$	$E(31)^{8}$	$E(31)^5$	$E(31)^2$	$E(31)^{30}$	$E(31)^{27}$	$E(31)^{24}$	$E(31)^{21}$	$E(31)^{18}$	$E(31)^{15}$	$E(31)^{12}$	$E(31)^9$	$E(31)^{6}$	$E(31)^3$
χ_{30} 1	$E(31)^{29}$	` ′ 20	$E(31)^{25}$		$E(31)^{21}$	\ /	$E(31)^{17}$	$E(31)^{15}$	$E(31)^{13}$	$E(31)^{11}$	$E(31)^9$	$E(31)^{7}$	$E(31)^5$	$E(31)^3$	E(31)	` '	$E(31)^{28}$	\ /	\ /	$E(31)^{22}$	$E(31)^{20}$	$E(31)^{18}$	$E(31)^{16}$	$E(31)^{14}$	$E(31)^{12}$	$E(31)^{10}$	$E(31)^{8}$	$E(31)^{6}$	$E(31)^4$	$E(31)^2$
χ_{31} 1	$E(31)^{30}$	$E(31)^{29}$	$E(31)^{28}$	$E(31)^{27}$	$E(31)^{26}$	$E(31)^{25}$	$E(31)^{24}$	$E(31)^{23}$	$E(31)^{22}$	$E(31)^{21}$	$E(31)^{20}$	$E(31)^{19}$	$E(31)^{18}$	$E(31)^{17}$	$E(31)^{16}$	$E(31)^{15}$	$E(31)^{14}$	$E(31)^{13}$	$E(31)^{12}$	$E(31)^{11}$	$E(31)^{10}$	$E(31)^9$	$E(31)^{8}$	$E(31)^{7}$	$E(31)^{6}$	$E(31)^{5}$	$E(31)^4$	$E(31)^{3}$	$E(31)^{2}$	E(31)

Trivial source character table of $G \cong C31$ at p = 31:

Invia source character table of $\phi = \cot at p = at$.	
Normalisers N_i	$N_1 \mid N_2$
p-subgroups of G up to conjugacy in G	$P_1 \mid P_2 \mid$
Representatives $n_j \in N_i$	1a 1a
$1 \cdot \chi_1 + 1 \cdot \chi_2 + 1 \cdot \chi_3 + 1 \cdot \chi_4 + 1 \cdot \chi_5 + 1 \cdot \chi_6 + 1 \cdot \chi_7 + 1 \cdot \chi_8 + 1 \cdot \chi_9 + 1 \cdot \chi_{10} + 1 \cdot \chi_{11} + 1 \cdot \chi_{12} + 1 \cdot \chi_{13} + 1 \cdot \chi_{14} + 1 \cdot \chi_{15} + 1 \cdot \chi_{16} + 1 \cdot \chi_{17} + 1 \cdot \chi_{18} + 1 \cdot \chi_{21} + 1 \cdot \chi_{22} + 1 \cdot \chi_{23} + 1 \cdot \chi_{24} + 1 \cdot \chi_{25} + 1 \cdot \chi_{26} + 1 \cdot \chi_{27} + 1 \cdot \chi_{29} + 1 \cdot \chi_{30} + 1 \cdot \chi_{31} + 1 \cdot \chi_{11} + 1 \cdot $	31 0
$1 \cdot \chi_1 + 0 \cdot \chi_2 + 0 \cdot \chi_3 + 0 \cdot \chi_4 + 0 \cdot \chi_5 + 0 \cdot \chi_6 + 0 \cdot \chi_7 + 0 \cdot \chi_8 + 0 \cdot \chi_9 + 0 \cdot \chi_{10} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18} + 0 \cdot \chi_{21} + 0 \cdot \chi_{22} + 0 \cdot \chi_{23} + 0 \cdot \chi_{24} + 0 \cdot \chi_{25} + 0 \cdot \chi_{26} + 0 \cdot \chi_{27} + 0 \cdot \chi_{28} + 0 \cdot \chi_{29} + 0 \cdot \chi_{30} + 0 \cdot \chi_{31} + 0 \cdot \chi_{11} + 0 \cdot \chi_{12} + 0 \cdot \chi_{13} + 0 \cdot \chi_{14} + 0 \cdot \chi_{15} + 0 \cdot \chi_{16} + 0 \cdot \chi_{17} + 0 \cdot \chi_{18} + 0 \cdot \chi_{19} + 0 \cdot \chi_{21} + 0 \cdot \chi_{21} + 0 \cdot \chi_{22} + 0 \cdot \chi_{23} + 0 \cdot \chi_{24} + 0 \cdot \chi_{25} + 0 \cdot \chi_{26} + 0 \cdot \chi_{27} + 0 \cdot \chi_{28} + 0 \cdot \chi_{29} + 0 \cdot \chi_{30} + 0 \cdot \chi_{31} + 0 \cdot $. 1 1

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P_1 = Group([()]) \cong 1
P_2 = Group([(1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31)]) \cong C31
```

 $N_1 = Group([(1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31)]) \cong C31 \\ N_2 = Group([(1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31)]) \cong C31 \\ N_3 = Group([(1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31)]) \cong C31 \\ N_4 = Group([(1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31)]) \cong C31 \\ N_5 = Group([(1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31)] \otimes C31 \\ N_5 = Group([(1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31)] \otimes C31 \\ N_5 = Group([(1,2,3,4,5,6,12,12,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31)] \otimes C31 \\ N_5 = Group([(1,2,3,4,12,14,15,14,15,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31)] \otimes C31 \\ N_5 = Group([(1,2,3,4,12,14,15,$