| | | | $p_0$ | $p_1$ | $p_2$ | $p_3$ | $p_4$ | $p_5$ | $p_6$ | $p_7$ | $p_8$ | $p_9$ | $p_{10}$ | $p_{11}$ | $p_{12}$ | $p_{13}$ | $p_{14}$ | $p_{15}$ | $p_{16}$ | $p_{17}$ | $p_{18}$ | $p_{19}$ | $p_{20}$ | $p_{21}$ | $p_{22}$ | $p_{23}$ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 1 2 3<br>1 2 3 0<br>3 0 1 2<br>2 3 0 1 | $s_{5}$ | Quasigroup<br>Right Identity | x<br>$0+p_0$ | $p_0+0$ | | | | | | | $p_0+1$ | $1+p_0$ | | | | | | | $3+p_0$ | $p_0+2$ | $2+p_0$ | $p_0+3$ | | | | |
| 0 1 2 3<br>1 3 0 2<br>3 2 1 0<br>2 0 3 1 | $s_{7}$ | Quasigroup<br>Right Identity | x<br>$0+p_0$ | $p_0+0$ | | | | | | | | | $1+p_0$ | $p_0+1$ | $p_0+2$ | $3+p_0$ | | | | | | | | | $p_0+3$ | $2+p_0$ |
| 0 1 2 3<br>2 0 3 1<br>3 2 1 0<br>1 3 0 2 | $s_{9}$ | Quasigroup<br>Right Identity | x<br>$0+p_0$ | | | $p_0+0$ | | | $p_0+1$ | | | | $3+p_0$ | | | $1+p_0$ | | | | $p_0+2$ | | | $p_0+3$ | | | $2+p_0$ |
| 0 1 2 3<br>2 3 0 1<br>1 2 3 0<br>3 0 1 2 | $s_{11}$ | Quasigroup<br>Right Identity | x<br>$0+p_0$ | | $p_0+0$ | | | | | | | $2+p_0$ | | $p_0+1$ | | $p_0+2$ | | | $1+p_0$ | | $3+p_0$ | | $p_0+3$ | | | |
| 0 1 2 3<br>2 3 0 1<br>3 0 1 2<br>1 2 3 0 | $s_{12}$ | Quasigroup<br>Right Identity | x<br>$0+p_0$ | | | $p_0+0$ | | | | | | $3+p_0$ | $p_0+1$ | | $p_0+2$ | | | | $1+p_0$ | | $2+p_0$ | | | $p_0+3$ | | |
| 0 1 2 3<br>2 3 1 0<br>1 0 3 2<br>3 2 0 1 | $s_{14}$ | Quasigroup<br>Right Identity | x<br>$0+p_0$ | | $p_0+0$ | | | | | $2+p_0$ | | | $p_0+1$ | | | | | $p_0+2$ | | $1+p_0$ | | $p_0+3$ | | | $3+p_0$ | |
| 0 1 2 3<br>2 3 1 0<br>3 2 0 1<br>1 0 3 2 | $s_{15}$ | Quasigroup<br>Right Identity | x<br>$0+p_0$ | | | $p_0+0$ | | | | $3+p_0$ | | | | $p_0+1$ | | | $p_0+2$ | | | $1+p_0$ | $p_0+3$ | | | | $2+p_0$ | |
| 0 1 2 3<br>3 0 1 2<br>1 2 3 0<br>2 3 0 1 | $s_{16}$ | Quasigroup<br>Right Identity | x<br>$0+p_0$ | | | | $p_0+0$ | | $p_0+1$ | | | $2+p_0$ | | | | | | $p_0+2$ | $3+p_0$ | | $1+p_0$ | | | | $p_0+3$ | |
| 0 1 2 3<br>3 2 0 1<br>1 0 3 2<br>2 3 1 0 | $s_{18}$ | Quasigroup<br>Right Identity | x<br>$0+p_0$ | | | | $p_0+0$ | | | $2+p_0$ | $p_0+1$ | | | | | $p_0+2$ | | | | $3+p_0$ | | | | $p_0+3$ | $1+p_0$ | |
| 0 1 2 3<br>3 2 0 1<br>2 3 1 0<br>1 0 3 2 | $s_{19}$ | Quasigroup<br>Right Identity | x<br>$0+p_0$ | | | | | $p_0+0$ | | $3+p_0$ | | $p_0+1$ | | | $p_0+2$ | | | | | $2+p_0$ | | | $p_0+3$ | | $1+p_0$ | |
| 0 1 2 3<br>3 2 1 0<br>1 3 0 2<br>2 0 3 1 | $s_{21}$ | Quasigroup<br>Right Identity | x<br>$0+p_0$ | | | | $p_0+0$ | | | | | $p_0+1$ | $2+p_0$ | | | $3+p_0$ | $p_0+2$ | | | | | $p_0+3$ | | | | $1+p_0$ |
| 0 1 2 3<br>3 2 1 0<br>2 0 3 1<br>1 3 0 2 | $s_{22}$ | Quasigroup<br>Right Identity | x<br>$0+p_0$ | | | | | $p_0+0$ | | | $p_0+1$ | | $3+p_0$ | | | $2+p_0$ | | $p_0+2$ | | | $p_0+3$ | | | | | $1+p_0$ |
| 0 1 3 2<br>1 2 0 3<br>2 3 1 0<br>3 0 2 1 | $s_{28}$ | Quasigroup<br>Left Identity | x<br>$p_0+0$ | $0+p_0$ | | | | | | | $1+p_0$ | $p_0+1$ | | | | | | | $p_0+3$ | $2+p_0$ | $p_0+2$ | $3+p_0$ | | | | |
| 0 1 3 2<br>1 2 0 3<br>3 0 2 1<br>2 3 1 0 | $s_{29}$ | Quasigroup<br>Commutative | x | $0+p_0$<br>$p_0+0$ | | | | | | | $1+p_0$<br>$p_0+1$ | | | | | | | | | $3+p_0$<br>$p_0+3$ | | $2+p_0$<br>$p_0+2$ | | | | |
| 0 1 3 2<br>1 3 2 0<br>2 0 1 3<br>3 2 0 1 | $s_{30}$ | Quasigroup<br>Left Identity | x<br>$p_0+0$ | $0+p_0$ | | | | | | | | | $p_0+1$ | $1+p_0$ | $2+p_0$ | $p_0+3$ | | | | | | | | | $3+p_0$ | $p_0+2$ |
| 0 1 3 2<br>1 3 2 0<br>3 2 0 1<br>2 0 1 3 | $s_{31}$ | Quasigroup<br>Commutative | x | $0+p_0$<br>$p_0+0$ | | | | | | | | | | $1+p_0$<br>$p_0+1$ | $3+p_0$<br>$p_0+3$ | | | | | | | | | | $2+p_0$<br>$p_0+2$ | |
| 0 1 3 2<br>2 0 1 3<br>1 3 2 0<br>3 2 0 1 | $s_{32}$ | Quasigroup | x | $0+p_0$ | $p_0+0$ | | | | | $p_0+1$ | | | | $2+p_0$ | $1+p_0$ | | | | $p_0+3$ | | | | | $p_0+2$ | $3+p_0$ | |
| 0 1 3 2<br>2 0 1 3<br>3 2 0 1<br>1 3 2 0 | $s_{33}$ | Quasigroup | x | $0+p_0$ | | $p_0+0$ | | | $p_0+1$ | | | | | $3+p_0$ | $1+p_0$ | | | | | $p_0+3$ | | | $p_0+2$ | | $2+p_0$ | |
| 0 1 3 2<br>2 3 0 1<br>1 0 2 3<br>3 2 1 0 | $s_{34}$ | Quasigroup | x | $0+p_0$ | $p_0+0$ | | | | $2+p_0$ | | | | $p_0+1$ | | | | | $p_0+3$ | $1+p_0$ | | | $p_0+2$ | | | | $3+p_0$ |
| 0 1 3 2<br>2 3 0 1<br>3 2 1 0<br>1 0 2 3 | $s_{35}$ | Quasigroup | x | $0+p_0$ | | $p_0+0$ | | | $3+p_0$ | | | | | $p_0+1$ | | | $p_0+3$ | | $1+p_0$ | | $p_0+2$ | | | | | $2+p_0$ |
| 0 1 3 2<br>2 3 1 0<br>1 2 0 3<br>3 0 2 1 | $s_{37}$ | Quasigroup | x | $0+p_0$ | $p_0+0$ | | | | | | $2+p_0$ | | | $p_0+1$ | | $p_0+3$ | | | | $1+p_0$ | | $3+p_0$ | $p_0+2$ | | | |
| 0 1 3 2<br>2 3 1 0<br>3 0 2 1<br>1 2 0 3 | $s_{38}$ | Quasigroup | x | $0+p_0$ | | $p_0+0$ | | | | | $3+p_0$ | | $p_0+1$ | | $p_0+3$ | | | | | $1+p_0$ | | $2+p_0$ | | $p_0+2$ | | |
| 0 1 3 2<br>3 0 2 1<br>1 2 0 3<br>2 3 1 0 | $s_{40}$ | Quasigroup | x | $0+p_0$ | | | $p_0+0$ | | $p_0+1$ | | $2+p_0$ | | | | | | | $p_0+3$ | | $3+p_0$ | | $1+p_0$ | | | $p_0+2$ | |
| 0 1 3 2<br>3 0 2 1<br>2 3 1 0<br>1 2 0 3 | $s_{41}$ | Quasigroup | x | $0+p_0$ | | | | $p_0+0$ | | $p_0+1$ | $3+p_0$ | | | | | | $p_0+3$ | | | $2+p_0$ | | $1+p_0$ | | | | $p_0+2$ |
| 0 1 3 2<br>3 2 0 1<br>1 3 2 0<br>2 0 1 3 | $s_{43}$ | Quasigroup | x | $0+p_0$ | | | $p_0+0$ | | | | | $p_0+1$ | | $2+p_0$ | $3+p_0$ | | $p_0+3$ | | | | | $p_0+2$ | | | $1+p_0$ | |
| 0 1 3 2<br>3 2 0 1<br>2 0 1 3<br>1 3 2 0 | $s_{44}$ | Quasigroup | x | $0+p_0$ | | | | $p_0+0$ | | | $p_0+1$ | | | $3+p_0$ | $2+p_0$ | | | $p_0+3$ | | | $p_0+2$ | | | | $1+p_0$ | |
| 0 1 3 2<br>3 2 1 0<br>1 0 2 3<br>2 3 0 1 | $s_{46}$ | Quasigroup | x | $0+p_0$ | | | $p_0+0$ | | $2+p_0$ | | $p_0+1$ | | | | | $p_0+3$ | | | $3+p_0$ | | | | | $p_0+2$ | | $1+p_0$ |
| 0 1 3 2<br>3 2 1 0<br>2 3 0 1<br>1 0 2 3 | $s_{47}$ | Quasigroup | x | $0+p_0$ | | | | $p_0+0$ | $3+p_0$ | | | $p_0+1$ | | | $p_0+3$ | | | | $2+p_0$ | | | | $p_0+2$ | | | $1+p_0$ |
| 0 2 1 3<br>1 0 3 2<br>3 1 2 0<br>2 3 0 1 | $s_{49}$ | Quasigroup | x | $p_0+0$ | $0+p_0$ | | | | | $1+p_0$ | | | | $p_0+2$ | $p_0+1$ | | | | $3+p_0$ | | | | | $2+p_0$ | $p_0+3$ | |
| 0 2 1 3<br>1 3 0 2<br>2 1 3 0<br>3 0 2 1 | $s_{51}$ | Quasigroup<br>Left Identity | x<br>$p_0+0$ | | $0+p_0$ | | | | | $p_0+2$ | | | $1+p_0$ | | | | | $2+p_0$ | | $p_0+1$ | | $3+p_0$ | | | $p_0+3$ | |
| 0 2 1 3<br>1 3 0 2<br>3 0 2 1<br>2 1 3 0 | $s_{52}$ | Quasigroup | x | $p_0+0$ | $0+p_0$ | | | | | $p_0+2$ | | | $1+p_0$ | | | | | $3+p_0$ | $p_0+1$ | | | $2+p_0$ | | | | $p_0+3$ |
| 0 2 1 3<br>1 3 2 0<br>2 0 3 1<br>3 1 0 2 | $s_{54}$ | Quasigroup<br>Left Identity | x<br>$p_0+0$ | | $0+p_0$ | | | | | | | $p_0+2$ | | $1+p_0$ | | $2+p_0$ | | | | $p_0+1$ | | $p_0+3$ | | $3+p_0$ | | |
| 0 2 1 3<br>1 3 2 0<br>3 1 0 2<br>2 0 3 1 | $s_{55}$ | Quasigroup | x | $p_0+0$ | $0+p_0$ | | | | | | $p_0+2$ | | | $1+p_0$ | | $3+p_0$ | | | | $p_0+1$ | | $p_0+3$ | $2+p_0$ | | | |
| 0 2 1 3<br>2 0 3 1<br>1 3 2 0<br>3 1 0 2 | $s_{57}$ | Quasigroup<br>Commutative | x | | $0+p_0$<br>$p_0+0$ | | | | | | | | | $2+p_0$<br>$p_0+2$ | | $1+p_0$<br>$p_0+1$ | | | | | | | $3+p_0$<br>$p_0+3$ | | | |
| 0 2 1 3<br>2 0 3 1<br>3 1 0 2<br>1 3 2 0 | $s_{58}$ | Quasigroup | x | | $0+p_0$ | $p_0+0$ | | | | | | | $p_0+2$ | $3+p_0$ | $p_0+1$ | $1+p_0$ | | | | | | | $2+p_0$ | $p_0+3$ | | |
| 0 2 1 3<br>2 1 3 0<br>1 3 0 2<br>3 0 2 1 | $s_{60}$ | Quasigroup<br>Commutative | x | | $0+p_0$<br>$p_0+0$ | | | | | | | | $2+p_0$<br>$p_0+2$ | | | | | $1+p_0$<br>$p_0+1$ | | | | $3+p_0$<br>$p_0+3$ | | | | |
| 0 2 1 3<br>2 1 3 0<br>3 0 2 1<br>1 3 0 2 | $s_{61}$ | Quasigroup | x | | $0+p_0$ | $p_0+0$ | | | | | | | $3+p_0$ | $p_0+2$ | | | $p_0+1$ | $1+p_0$ | | | $p_0+3$ | $2+p_0$ | | | | |
| 0 2 1 3<br>2 3 0 1<br>3 1 2 0<br>1 0 3 2 | $s_{63}$ | Quasigroup | x | | $0+p_0$ | $p_0+0$ | | | $p_0+2$ | $3+p_0$ | | | | | | | | | $1+p_0$ | $p_0+1$ | | | $p_0+3$ | $2+p_0$ | | |
| 0 2 1 3<br>3 0 2 1<br>1 3 0 2<br>2 1 3 0 | $s_{64}$ | Quasigroup | x | | $0+p_0$ | | $p_0+0$ | | | | $p_0+2$ | | $2+p_0$ | | | $p_0+1$ | | $3+p_0$ | | | | $1+p_0$ | | $p_0+3$ | | |
| 0 2 1 3<br>3 0 2 1<br>2 1 3 0<br>1 3 0 2 | $s_{65}$ | Quasigroup | x | | $0+p_0$ | | | $p_0+0$ | | | | $p_0+2$ | $3+p_0$ | | $p_0+1$ | | | $2+p_0$ | | | | $1+p_0$ | $p_0+3$ | | | |
| 0 2 1 3<br>3 1 0 2<br>1 3 2 0<br>2 0 3 1 | $s_{66}$ | Quasigroup | x | | $0+p_0$ | | $p_0+0$ | | $p_0+2$ | | | | | $2+p_0$ | | $3+p_0$ | | $p_0+1$ | | | | | $1+p_0$ | | $p_0+3$ | |
| 0 2 1 3<br>3 1 0 2<br>2 0 3 1<br>1 3 2 0 | $s_{67}$ | Quasigroup | x | | $0+p_0$ | | | $p_0+0$ | | $p_0+2$ | | | | $3+p_0$ | | $2+p_0$ | $p_0+1$ | | | | | | $1+p_0$ | | | $p_0+3$ |
| 0 2 1 3<br>3 1 2 0<br>1 0 3 2<br>2 3 0 1 | $s_{68}$ | Quasigroup | x | | $0+p_0$ | | $p_0+0$ | | | $2+p_0$ | | $p_0+2$ | | | | | $p_0+1$ | | $3+p_0$ | | | $p_0+3$ | | $1+p_0$ | | |
| 0 2 1 3<br>3 1 2 0<br>2 3 0 1<br>1 0 3 2 | $s_{71}$ | Quasigroup | x | | $0+p_0$ | | | $p_0+0$ | | $3+p_0$ | $p_0+2$ | | | | | | | $p_0+1$ | $2+p_0$ | | $p_0+3$ | | | $1+p_0$ | | |
| 0 2 3 1<br>1 0 2 3<br>2 3 1 0<br>3 1 0 2 | $s_{72}$ | Quasigroup<br>Left Identity | x<br>$p_0+0$ | | | $0+p_0$ | | | $1+p_0$ | | | | $p_0+3$ | | | $p_0+1$ | | | | $2+p_0$ | | | $3+p_0$ | | | $p_0+2$ |
| 0 2 3 1<br>1 0 2 3<br>3 1 0 2<br>2 3 1 0 | $s_{73}$ | Quasigroup | x | $p_0+0$ | | $0+p_0$ | | | $1+p_0$ | | | | | $p_0+3$ | $p_0+1$ | | | | | $3+p_0$ | | | $2+p_0$ | | $p_0+2$ | |
| 0 2 3 1<br>1 3 0 2<br>2 0 1 3<br>3 1 2 0 | $s_{74}$ | Quasigroup<br>Left Identity | x<br>$p_0+0$ | | | $0+p_0$ | | | | | | $p_0+3$ | $1+p_0$ | | $2+p_0$ | | | | $p_0+1$ | | $p_0+2$ | | | $3+p_0$ | | |
| 0 2 3 1<br>1 3 0 2<br>3 1 2 0<br>2 0 1 3 | $s_{75}$ | Quasigroup | x | $p_0+0$ | | $0+p_0$ | | | | | $p_0+3$ | | $1+p_0$ | | $3+p_0$ | | | | | $p_0+1$ | | $p_0+2$ | | $2+p_0$ | | |
| 0 2 3 1<br>1 3 2 0<br>2 1 0 3<br>3 0 1 2 | $s_{77}$ | Quasigroup<br>Left Identity | x<br>$p_0+0$ | | $0+p_0$ | | | | | $p_0+3$ | | | | $1+p_0$ | | | $2+p_0$ | | | $p_0+1$ | $3+p_0$ | | | | | $p_0+2$ |
| 0 2 3 1<br>1 3 2 0<br>3 0 1 2<br>2 1 0 3 | $s_{78}$ | Quasigroup | x | $p_0+0$ | | $0+p_0$ | | | $p_0+3$ | | | | | $1+p_0$ | | | $3+p_0$ | | $p_0+1$ | | $2+p_0$ | | | | | $p_0+2$ |
| 0 2 3 1<br>2 0 1 3<br>1 3 0 2<br>3 1 2 0 | $s_{80}$ | Quasigroup | x | | $p_0+0$ | $0+p_0$ | | | | | | | $2+p_0$ | $p_0+3$ | $1+p_0$ | $p_0+1$ | | | | | | | $p_0+2$ | $3+p_0$ | | |
| 0 2 3 1<br>2 0 1 3<br>3 1 2 0<br>1 3 0 2 | $s_{83}$ | Quasigroup<br>Commutative | x | | | $0+p_0$<br>$p_0+0$ | | | | | | | $3+p_0$<br>$p_0+3$ | | $1+p_0$<br>$p_0+1$ | | | | | | | | | $2+p_0$<br>$p_0+2$ | | |
| 0 2 3 1<br>2 1 0 3<br>1 3 2 0<br>3 0 1 2 | $s_{84}$ | Quasigroup | x | | $p_0+0$ | $0+p_0$ | | | | | | | $p_0+3$ | $2+p_0$ | | | $1+p_0$ | $p_0+1$ | | | $3+p_0$ | $p_0+2$ | | | | |
| 0 2 3 1<br>2 1 0 3<br>3 0 1 2<br>1 3 2 0 | $s_{85}$ | Quasigroup<br>Commutative | x | | | $0+p_0$<br>$p_0+0$ | | | | | | | | $3+p_0$<br>$p_0+3$ | | | $1+p_0$<br>$p_0+1$ | | | | $2+p_0$<br>$p_0+2$ | | | | | |
| 0 2 3 1<br>2 3 1 0<br>1 0 2 3<br>3 1 0 2 | $s_{86}$ | Quasigroup | x | | $p_0+0$ | $0+p_0$ | | | $2+p_0$ | $p_0+3$ | | | | | | | | | $p_0+1$ | $1+p_0$ | | | $3+p_0$ | $p_0+2$ | | |
| 0 2 3 1<br>2 3 1 0<br>3 1 0 2<br>1 0 2 3 | $s_{87}$ | Quasigroup<br>Commutative | x | | | $0+p_0$<br>$p_0+0$ | | | $3+p_0$<br>$p_0+3$ | | | | | | | | | | | $1+p_0$<br>$p_0+1$ | | | $2+p_0$<br>$p_0+2$ | | | |
| 0 2 3 1<br>3 0 1 2<br>1 3 2 0<br>2 1 0 3 | $s_{88}$ | Quasigroup | x | | | $0+p_0$ | $p_0+0$ | | | | $p_0+3$ | | | $2+p_0$ | | $p_0+1$ | $3+p_0$ | | | | $1+p_0$ | | | $p_0+2$ | | |
| 0 2 3 1<br>3 0 1 2<br>2 1 0 3<br>1 3 2 0 | $s_{89}$ | Quasigroup | x | | | $0+p_0$ | | $p_0+0$ | | | | $p_0+3$ | | $3+p_0$ | $p_0+1$ | | $2+p_0$ | | | | $1+p_0$ | | $p_0+2$ | | | |
| 0 2 3 1<br>3 1 0 2<br>1 0 2 3<br>2 3 1 0 | $s_{90}$ | Quasigroup | x | | | $0+p_0$ | $p_0+0$ | | $2+p_0$ | | | $p_0+3$ | | | | | $p_0+1$ | | | $3+p_0$ | | $p_0+2$ | $1+p_0$ | | | |
| 0 2 3 1<br>3 1 0 2<br>2 3 1 0<br>1 0 2 3 | $s_{93}$ | Quasigroup | x | | | $0+p_0$ | | $p_0+0$ | $3+p_0$ | | $p_0+3$ | | | | | | | $p_0+1$ | | $2+p_0$ | $p_0+2$ | | $1+p_0$ | | | |
| 0 2 3 1<br>3 1 2 0<br>1 3 0 2<br>2 0 1 3 | $s_{94}$ | Quasigroup | x | | | $0+p_0$ | $p_0+0$ | | $p_0+3$ | | | | $2+p_0$ | | $3+p_0$ | | | $p_0+1$ | | | | | | $1+p_0$ | $p_0+2$ | |
| 0 2 3 1<br>3 1 2 0<br>2 0 1 3<br>1 3 0 2 | $s_{95}$ | Quasigroup | x | | | $0+p_0$ | | $p_0+0$ | | $p_0+3$ | | | $3+p_0$ | | $2+p_0$ | | $p_0+1$ | | | | | | | $1+p_0$ | | $p_0+2$ |
| 0 3 1 2<br>1 0 2 3<br>2 1 3 0<br>3 2 0 1 | $s_{96}$ | Quasigroup<br>Left Identity | x<br>$p_0+0$ | | | | $0+p_0$ | | $1+p_0$ | | | $p_0+2$ | | | | | | $2+p_0$ | $p_0+3$ | | $p_0+1$ | | | | $3+p_0$ | |
| 0 3 1 2<br>1 0 2 3<br>3 2 0 1<br>2 1 3 0 | $s_{97}$ | Quasigroup | x | $p_0+0$ | | | $0+p_0$ | | $1+p_0$ | | $p_0+2$ | | | | | | | $3+p_0$ | | $p_0+3$ | | $p_0+1$ | | | $2+p_0$ | |
| 0 3 1 2<br>1 2 0 3<br>2 0 3 1<br>3 1 2 0 | $s_{98}$ | Quasigroup<br>Left Identity | x<br>$p_0+0$ | | | | $0+p_0$ | | | $p_0+2$ | $1+p_0$ | | | | | $2+p_0$ | | | | $p_0+3$ | | | | $3+p_0$ | $p_0+1$ | |
| 0 3 1 2<br>1 2 0 3<br>3 1 2 0<br>2 0 3 1 | $s_{101}$ | Quasigroup | x | $p_0+0$ | | | $0+p_0$ | | $p_0+2$ | | $1+p_0$ | | | | | $3+p_0$ | | | $p_0+3$ | | | | | $2+p_0$ | | $p_0+1$ |
| 0 3 1 2<br>1 2 3 0<br>2 1 0 3<br>3 0 2 1 | $s_{102}$ | Quasigroup<br>Left Identity | x<br>$p_0+0$ | | | | $0+p_0$ | | | | | $1+p_0$ | $p_0+2$ | | | $p_0+3$ | $2+p_0$ | | | | | $3+p_0$ | | | | $p_0+1$ |
| 0 3 1 2<br>1 2 3 0<br>3 0 2 1<br>2 1 0 3 | $s_{103}$ | Quasigroup | x | $p_0+0$ | | | $0+p_0$ | | | | | $1+p_0$ | | $p_0+2$ | $p_0+3$ | | $3+p_0$ | | | | | $2+p_0$ | | | $p_0+1$ | |
| 0 3 1 2<br>2 0 3 1<br>1 2 0 3<br>3 1 2 0 | $s_{104}$ | Quasigroup | x | | $p_0+0$ | | $0+p_0$ | | | | $2+p_0$ | | $p_0+2$ | | | $1+p_0$ | | $p_0+3$ | | | | $p_0+1$ | | $3+p_0$ | | |
| 0 3 1 2<br>2 0 3 1<br>3 1 2 0<br>1 2 0 3 | $s_{105}$ | Quasigroup | x | | | $p_0+0$ | $0+p_0$ | | | | $3+p_0$ | | | $p_0+2$ | | $1+p_0$ | $p_0+3$ | | | | $p_0+1$ | | | $2+p_0$ | | |
| 0 3 1 2<br>2 1 0 3<br>1 2 3 0<br>3 0 2 1 | $s_{106}$ | Quasigroup | x | | $p_0+0$ | | $0+p_0$ | | | $p_0+2$ | | $2+p_0$ | | | | | $1+p_0$ | | $p_0+3$ | | | $3+p_0$ | | $p_0+1$ | | |
| 0 3 1 2<br>2 1 0 3<br>3 0 2 1<br>1 2 3 0 | $s_{107}$ | Quasigroup | x | | | $p_0+0$ | $0+p_0$ | | $p_0+2$ | | | $3+p_0$ | | | | | $1+p_0$ | | | $p_0+3$ | | $2+p_0$ | $p_0+1$ | | | |
| 0 3 1 2<br>2 1 3 0<br>1 0 2 3<br>3 2 0 1 | $s_{108}$ | Quasigroup | x | | $p_0+0$ | | $0+p_0$ | | $2+p_0$ | | | | | $p_0+2$ | | $p_0+3$ | | $1+p_0$ | | | | | $p_0+1$ | | $3+p_0$ | |
| 0 3 1 2<br>2 1 3 0<br>3 2 0 1<br>1 0 2 3 | $s_{111}$ | Quasigroup | x | | | $p_0+0$ | $0+p_0$ | | $3+p_0$ | | | | $p_0+2$ | | $p_0+3$ | | | $1+p_0$ | | | | | | $p_0+1$ | $2+p_0$ | |
| 0 3 1 2<br>3 0 2 1<br>1 2 3 0<br>2 1 0 3 | $s_{113}$ | Quasigroup<br>Commutative | x | | | | $0+p_0$<br>$p_0+0$ | | | | | $2+p_0$<br>$p_0+2$ | | | | | $3+p_0$<br>$p_0+3$ | | | | | $1+p_0$<br>$p_0+1$ | | | | |
| 0 3 1 2<br>3 0 2 1<br>2 1 0 3<br>1 2 3 0 | $s_{114}$ | Quasigroup | x | | | | $0+p_0$ | $p_0+0$ | | | $p_0+2$ | $3+p_0$ | | | | | $2+p_0$ | $p_0+3$ | | | $p_0+1$ | $1+p_0$ | | | | |
| 0 3 1 2<br>3 1 2 0<br>1 2 0 3<br>2 0 3 1 | $s_{116}$ | Quasigroup<br>Commutative | x | | | | $0+p_0$<br>$p_0+0$ | | | | $2+p_0$<br>$p_0+2$ | | | | | $3+p_0$<br>$p_0+3$ | | | | | | | | $1+p_0$<br>$p_0+1$ | | |
| 0 3 1 2<br>3 2 1 0<br>2 0 3 1<br>1 2 0 3 | $s_{117}$ | Quasigroup | x | | | | $0+p_0$ | $p_0+0$ | | | $3+p_0$ | $p_0+2$ | | | $p_0+3$ | $2+p_0$ | | | | | | | $p_0+1$ | $1+p_0$ | | |
| 0 3 1 2<br>3 2 0 1<br>1 0 2 3<br>2 1 3 0 | $s_{118}$ | Quasigroup<br>Commutative | x | | | | $0+p_0$<br>$p_0+0$ | | $2+p_0$<br>$p_0+2$ | | | | | | | | | $3+p_0$<br>$p_0+3$ | | | | | | | $1+p_0$<br>$p_0+1$ | |

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 3 1 2<br>3 2 0 1<br>2 1 3 0<br>1 0 2 3 | $s_{119}$ | Quasigroup | × | | | | $\overline{0+p_0}$ | $\overline{p_0+0}$ | $\overline{3+p_0}$ | $\overline{p_0+2}$ | | | | | | | $\overline{p_0+3}$ | $\overline{2+p_0}$ | | | | | | | $\overline{1+p_0}$ | $\overline{p_0+1}$ |
| 0 3 2 1<br>1 0 3 2<br>3 2 1 0<br>2 1 0 3 | $s_{121}$ | Quasigroup | × | $\overline{p_0+0}$ | | | | $\overline{0+p_0}$ | | $\overline{1+p_0}$ | $\overline{p_0+3}$ | | | | | | $\overline{3+p_0}$ | | | $\overline{p_0+2}$ | | $\overline{p_0+1}$ | | | | $\overline{2+p_0}$ |
| 0 3 2 1<br>1 2 0 3<br>2 1 3 0<br>3 0 1 2 | $s_{122}$ | Quasigroup<br>Left Identity | $\frac{\times}{p_0+0}$ | | | | | $\overline{0+p_0}$ | | | $\overline{1+p_0}$ | | $\overline{p_0+3}$ | | | $\overline{p_0+2}$ | | $\overline{2+p_0}$ | | | $\overline{3+p_0}$ | | | | | $\overline{p_0+1}$ |
| 0 3 2 1<br>1 2 0 3<br>3 0 1 2<br>2 1 3 0 | $s_{123}$ | Quasigroup | × | $\overline{p_0+0}$ | | | | $\overline{0+p_0}$ | | | $\overline{1+p_0}$ | | | $\overline{p_0+3}$ | $\overline{p_0+2}$ | | | $\overline{3+p_0}$ | | | $\overline{2+p_0}$ | | | | $\overline{p_0+1}$ | |
| 0 3 2 1<br>1 2 3 0<br>2 0 1 3<br>3 1 0 2 | $s_{124}$ | Quasigroup<br>Left Identity | $\frac{\times}{p_0+0}$ | | | | | $\overline{0+p_0}$ | | $\overline{p_0+3}$ | | $\overline{1+p_0}$ | | | $\overline{2+p_0}$ | | | | | $\overline{p_0+2}$ | | | $\overline{3+p_0}$ | | $\overline{p_0+1}$ | |
| 0 3 2 1<br>1 2 3 0<br>3 1 0 2<br>2 0 1 3 | $s_{127}$ | Quasigroup | × | $\overline{p_0+0}$ | | | | $\overline{0+p_0}$ | $\overline{p_0+3}$ | | | $\overline{1+p_0}$ | | | $\overline{3+p_0}$ | | | | $\overline{p_0+2}$ | | | | $\overline{2+p_0}$ | | | $\overline{p_0+1}$ |
| 0 3 2 1<br>2 0 1 3<br>1 2 3 0<br>3 1 0 2 | $s_{128}$ | Quasigroup | × | | $\overline{p_0+0}$ | | | $\overline{0+p_0}$ | | | | $\overline{2+p_0}$ | $\overline{p_0+3}$ | | $\overline{1+p_0}$ | | | $\overline{p_0+2}$ | | | | $\overline{p_0+1}$ | $\overline{3+p_0}$ | | | |
| 0 3 2 1<br>2 0 1 3<br>3 1 0 2<br>1 2 3 0 | $s_{129}$ | Quasigroup | × | | | $\overline{p_0+0}$ | | $\overline{0+p_0}$ | | | | $\overline{3+p_0}$ | | $\overline{p_0+3}$ | $\overline{1+p_0}$ | | $\overline{p_0+2}$ | | | | $\overline{p_0+1}$ | | $\overline{2+p_0}$ | | | |
| 0 3 2 1<br>2 1 0 3<br>1 0 3 2<br>3 2 1 0 | $s_{130}$ | Quasigroup | × | | $\overline{p_0+0}$ | | | $\overline{0+p_0}$ | | $\overline{2+p_0}$ | | | | $\overline{p_0+3}$ | | $\overline{p_0+2}$ | $\overline{1+p_0}$ | | | | | | $\overline{p_0+1}$ | | | $\overline{3+p_0}$ |
| 0 3 2 1<br>2 1 0 3<br>3 2 1 0<br>1 0 3 2 | $s_{133}$ | Quasigroup | × | | | $\overline{p_0+0}$ | | $\overline{0+p_0}$ | | $\overline{3+p_0}$ | | | $\overline{p_0+3}$ | | $\overline{p_0+2}$ | | $\overline{1+p_0}$ | | | | | | | $\overline{p_0+1}$ | | $\overline{2+p_0}$ |
| 0 3 2 1<br>2 1 3 0<br>1 2 0 3<br>3 0 1 2 | $s_{134}$ | Quasigroup | × | | $\overline{p_0+0}$ | | | $\overline{0+p_0}$ | | $\overline{p_0+3}$ | $\overline{2+p_0}$ | | | | | | | $\overline{1+p_0}$ | $\overline{p_0+2}$ | | $\overline{3+p_0}$ | | | $\overline{p_0+1}$ | | |
| 0 3 2 1<br>2 1 3 0<br>3 0 1 2<br>1 2 0 3 | $s_{135}$ | Quasigroup | × | | | $\overline{p_0+0}$ | | $\overline{0+p_0}$ | $\overline{p_0+3}$ | | $\overline{3+p_0}$ | | | | | | | $\overline{1+p_0}$ | | $\overline{p_0+2}$ | $\overline{2+p_0}$ | | $\overline{p_0+1}$ | | | |
| 0 3 2 1<br>3 0 1 2<br>1 2 0 3<br>2 1 3 0 | $s_{136}$ | Quasigroup | × | | | | $\overline{p_0+0}$ | $\overline{0+p_0}$ | | | $\overline{2+p_0}$ | $\overline{p_0+3}$ | | | | | $\overline{p_0+2}$ | $\overline{3+p_0}$ | | | $\overline{1+p_0}$ | $\overline{p_0+1}$ | | | | |
| 0 3 2 1<br>3 0 1 2<br>2 1 3 0<br>1 2 0 3 | $s_{139}$ | Quasigroup<br>Commutative | × | | | | | $\frac{\overline{0+p_0}}{\overline{p_0+0}}$ | | | $\frac{\overline{3+p_0}}{\overline{p_0+3}}$ | | | | | | | $\frac{\overline{2+p_0}}{\overline{p_0+2}}$ | | | $\frac{\overline{1+p_0}}{\overline{p_0+1}}$ | | | | | |
| 0 3 2 1<br>3 1 0 2<br>1 2 3 0<br>2 0 1 3 | $s_{140}$ | Quasigroup | × | | | | $\overline{p_0+0}$ | $\overline{0+p_0}$ | | | $\overline{p_0+3}$ | $\overline{2+p_0}$ | | | $\overline{3+p_0}$ | $\overline{p_0+2}$ | | | | | | | $\overline{1+p_0}$ | $\overline{p_0+1}$ | | |
| 0 3 2 1<br>3 1 0 2<br>2 0 1 3<br>1 2 3 0 | $s_{141}$ | Quasigroup<br>Commutative | × | | | | | $\frac{\overline{0+p_0}}{\overline{p_0+0}}$ | | | | $\frac{\overline{3+p_0}}{\overline{p_0+3}}$ | | | $\frac{\overline{2+p_0}}{\overline{p_0+2}}$ | | | | | | | | $\frac{\overline{1+p_0}}{\overline{p_0+1}}$ | | | |
| 0 3 2 1<br>3 2 1 0<br>1 0 3 2<br>2 1 0 3 | $s_{142}$ | Quasigroup | × | | | | $\overline{p_0+0}$ | $\overline{0+p_0}$ | $\overline{p_0+3}$ | $\overline{2+p_0}$ | | | | | | | $\overline{3+p_0}$ | $\overline{p_0+2}$ | | | | | | | $\overline{p_0+1}$ | $\overline{1+p_0}$ |
| 1 0 2 3<br>0 2 3 1<br>2 3 1 0<br>3 1 0 2 | $s_{148}$ | Quasigroup<br>Commutative | × | | | $\frac{\overline{1+p_0}}{\overline{p_0+1}}$ | | | $\frac{\overline{0+p_0}}{\overline{p_0+0}}$ | | | | | | | | | | | $\frac{\overline{2+p_0}}{\overline{p_0+2}}$ | | | $\frac{\overline{3+p_0}}{\overline{p_0+3}}$ | | | |
| 1 0 2 3<br>0 2 3 1<br>3 1 0 2<br>2 3 1 0 | $s_{149}$ | Quasigroup | × | | $\overline{p_0+1}$ | $\overline{1+p_0}$ | | | $\overline{0+p_0}$ | $\overline{p_0+0}$ | | | | | | | | | $\overline{p_0+2}$ | $\overline{3+p_0}$ | | | $\overline{2+p_0}$ | $\overline{p_0+3}$ | | |
| 1 0 2 3<br>0 3 1 2<br>2 1 3 0<br>3 2 0 1 | $s_{150}$ | Quasigroup<br>Commutative | × | | | | $\frac{\overline{1+p_0}}{\overline{p_0+1}}$ | | $\frac{\overline{0+p_0}}{\overline{p_0+0}}$ | | | | | | | | | $\frac{\overline{2+p_0}}{\overline{p_0+2}}$ | | | | | | | $\frac{\overline{3+p_0}}{\overline{p_0+3}}$ | |
| 1 0 2 3<br>0 3 1 2<br>3 2 0 1<br>2 1 3 0 | $s_{151}$ | Quasigroup | × | | | | $\overline{1+p_0}$ | $\overline{p_0+1}$ | $\overline{0+p_0}$ | $\overline{p_0+0}$ | | | | | | | $\overline{p_0+2}$ | $\overline{3+p_0}$ | | | | | | | $\overline{2+p_0}$ | $\overline{p_0+3}$ |
| 1 0 2 3<br>2 1 3 0<br>0 3 1 2<br>3 2 0 1 | $s_{152}$ | Quasigroup | × | $\overline{p_0+1}$ | | | $\overline{2+p_0}$ | | $\overline{0+p_0}$ | | $\overline{p_0+0}$ | | | | | | | $\overline{1+p_0}$ | | $\overline{p_0+2}$ | | $\overline{p_0+3}$ | | | $\overline{3+p_0}$ | |
| 1 0 2 3<br>2 1 3 0<br>3 2 0 1<br>0 3 1 2 | $s_{153}$ | Quasigroup<br>Left Identity | $\frac{\times}{p_0+1}$ | | | | $\overline{3+p_0}$ | | $\overline{0+p_0}$ | | | $\overline{p_0+0}$ | | | | | | $\overline{1+p_0}$ | $\overline{p_0+2}$ | | $\overline{p_0+3}$ | | | | $\overline{2+p_0}$ | |
| 1 0 2 3<br>2 3 0 1<br>0 1 3 2<br>3 2 1 0 | $s_{154}$ | Quasigroup | × | $\overline{2+p_0}$ | | | $\overline{p_0+1}$ | | $\overline{0+p_0}$ | | $\overline{p_0+0}$ | | | | | $\overline{p_0+2}$ | | | $\overline{1+p_0}$ | | | | | | $\overline{p_0+3}$ | | $\overline{3+p_0}$ |
| 1 0 2 3<br>2 3 0 1<br>3 2 1 0<br>0 1 3 2 | $s_{155}$ | Quasigroup | × | $\overline{3+p_0}$ | | | | $\overline{p_0+1}$ | $\overline{0+p_0}$ | | | $\overline{p_0+0}$ | | | $\overline{p_0+2}$ | | | | $\overline{1+p_0}$ | | | | $\overline{p_0+3}$ | | | $\overline{2+p_0}$ |
| 1 0 2 3<br>2 3 1 0<br>0 2 3 1<br>3 1 0 2 | $s_{157}$ | Quasigroup | × | | | $\overline{2+p_0}$ | | $\overline{p_0+1}$ | $\overline{0+p_0}$ | | $\overline{p_0+0}$ | | | | | | | $\overline{p_0+2}$ | | $\overline{1+p_0}$ | $\overline{p_0+3}$ | | $\overline{3+p_0}$ | | | |
| 1 0 2 3<br>2 3 1 0<br>3 1 0 2<br>0 2 3 1 | $s_{158}$ | Quasigroup | × | | | $\overline{3+p_0}$ | $\overline{p_0+1}$ | | $\overline{0+p_0}$ | | | $\overline{p_0+0}$ | | | | | $\overline{p_0+2}$ | | | $\overline{1+p_0}$ | | $\overline{p_0+3}$ | $\overline{2+p_0}$ | | | |
| 1 0 2 3<br>3 1 0 2<br>0 2 3 1<br>2 3 1 0 | $s_{160}$ | Quasigroup<br>Left Identity | $\frac{\times}{p_0+1}$ | | | $\overline{2+p_0}$ | | | $\overline{0+p_0}$ | | | | $\overline{p_0+0}$ | | | $\overline{p_0+2}$ | | | | $\overline{3+p_0}$ | | | $\overline{1+p_0}$ | | | $\overline{p_0+3}$ |
| 1 0 2 3<br>3 1 0 2<br>2 3 1 0<br>0 2 3 1 | $s_{161}$ | Quasigroup | × | $\overline{p_0+1}$ | | $\overline{3+p_0}$ | | | $\overline{0+p_0}$ | | | | | $\overline{p_0+0}$ | $\overline{p_0+2}$ | | | | | $\overline{2+p_0}$ | | | $\overline{1+p_0}$ | | $\overline{p_0+3}$ | |
| 1 0 2 3<br>3 2 0 1<br>0 3 1 2<br>2 1 3 0 | $s_{163}$ | Quasigroup | × | | | $\overline{p_0+1}$ | $\overline{2+p_0}$ | | $\overline{0+p_0}$ | | | | $\overline{p_0+0}$ | | $\overline{p_0+2}$ | | | $\overline{3+p_0}$ | | | | | | $\overline{p_0+3}$ | $\overline{1+p_0}$ | |
| 1 0 2 3<br>3 2 0 1<br>2 1 3 0<br>0 3 1 2 | $s_{164}$ | Quasigroup | × | | $\overline{p_0+1}$ | | $\overline{3+p_0}$ | | $\overline{0+p_0}$ | | | | | $\overline{p_0+0}$ | | $\overline{p_0+2}$ | | $\overline{2+p_0}$ | | | | | $\overline{p_0+3}$ | | $\overline{1+p_0}$ | |
| 1 0 2 3<br>3 2 1 0<br>0 1 3 2<br>2 3 0 1 | $s_{166}$ | Quasigroup | × | $\overline{2+p_0}$ | $\overline{p_0+1}$ | | | | $\overline{0+p_0}$ | | | | $\overline{p_0+0}$ | | | | | $\overline{p_0+2}$ | $\overline{3+p_0}$ | | | $\overline{p_0+3}$ | | | | $\overline{1+p_0}$ |
| 1 0 2 3<br>3 2 1 0<br>2 3 0 1<br>0 1 3 2 | $s_{167}$ | Quasigroup | × | $\overline{3+p_0}$ | | $\overline{p_0+1}$ | | | $\overline{0+p_0}$ | | | | | $\overline{p_0+0}$ | | | $\overline{p_0+2}$ | | $\overline{2+p_0}$ | | $\overline{p_0+3}$ | | | | | $\overline{1+p_0}$ |
| 1 0 3 2<br>0 2 1 3<br>2 3 0 1<br>3 1 2 0 | $s_{172}$ | Quasigroup | × | | $\overline{1+p_0}$ | $\overline{p_0+1}$ | | | $\overline{p_0+0}$ | $\overline{0+p_0}$ | | | | | | | | | $\overline{2+p_0}$ | $\overline{p_0+3}$ | | | $\overline{p_0+2}$ | $\overline{3+p_0}$ | | |
| 1 0 3 2<br>0 3 2 1<br>2 1 0 3<br>3 2 1 0 | $s_{174}$ | Quasigroup | × | | | | $\overline{p_0+1}$ | $\overline{1+p_0}$ | $\overline{p_0+0}$ | $\overline{0+p_0}$ | | | | | | | $\overline{2+p_0}$ | $\overline{p_0+3}$ | | | | | | | $\overline{p_0+2}$ | $\overline{3+p_0}$ |
| 1 0 3 2<br>2 1 0 3<br>0 3 2 1<br>3 2 1 0 | $s_{176}$ | Quasigroup | × | $\overline{p_0+1}$ | | | | $\overline{2+p_0}$ | | $\overline{0+p_0}$ | $\overline{p_0+0}$ | | | | | | $\overline{1+p_0}$ | | | $\overline{p_0+3}$ | | $\overline{p_0+2}$ | | | | $\overline{3+p_0}$ |
| 1 0 3 2<br>2 3 0 1<br>0 2 1 3<br>3 1 2 0 | $s_{179}$ | Quasigroup | × | | $\overline{2+p_0}$ | | | $\overline{p_0+1}$ | | $\overline{0+p_0}$ | $\overline{p_0+0}$ | | | | | | | $\overline{p_0+3}$ | $\overline{1+p_0}$ | | $\overline{p_0+2}$ | | | $\overline{3+p_0}$ | | |
| 1 0 3 2<br>2 3 0 1<br>3 1 2 0<br>0 2 1 3 | $s_{180}$ | Quasigroup | × | | $\overline{3+p_0}$ | | $\overline{p_0+1}$ | | $\overline{0+p_0}$ | | $\overline{p_0+0}$ | | | | | | $\overline{p_0+3}$ | | $\overline{1+p_0}$ | | | $\overline{p_0+2}$ | | $\overline{2+p_0}$ | | |
| 1 0 3 2<br>2 3 1 0<br>0 1 2 3<br>3 2 0 1 | $s_{182}$ | Quasigroup<br>Right Identity | $\frac{\times}{2+p_0}$ | | | | $\overline{p_0+1}$ | | $\overline{0+p_0}$ | $\overline{p_0+0}$ | | | | | $\overline{p_0+3}$ | | | | | $\overline{1+p_0}$ | | | | $\overline{p_0+2}$ | $\overline{3+p_0}$ | |
| 1 0 3 2<br>2 3 1 0<br>3 2 0 1<br>0 1 2 3 | $s_{183}$ | Quasigroup<br>Right Identity | $\frac{\times}{3+p_0}$ | | | | | $\overline{p_0+1}$ | | $\overline{0+p_0}$ | | $\overline{p_0+0}$ | | | $\overline{p_0+3}$ | | | | | $\overline{1+p_0}$ | | | $\overline{p_0+2}$ | | $\overline{2+p_0}$ | |
| 1 0 3 2<br>3 1 2 0<br>2 3 0 1<br>0 2 1 3 | $s_{185}$ | Quasigroup | × | $\overline{p_0+1}$ | $\overline{3+p_0}$ | | | | | $\overline{0+p_0}$ | | | | $\overline{p_0+0}$ | $\overline{p_0+3}$ | | | | $\overline{2+p_0}$ | | | | | $\overline{1+p_0}$ | $\overline{p_0+2}$ | |
| 1 0 3 2<br>3 2 0 1<br>0 1 2 3<br>2 3 1 0 | $s_{186}$ | Quasigroup<br>Right Identity | $\frac{\times}{2+p_0}$ | | $\overline{p_0+1}$ | | | | | $\overline{0+p_0}$ | | | $\overline{p_0+0}$ | | | | | $\overline{p_0+3}$ | | $\overline{3+p_0}$ | | $\overline{p_0+2}$ | | | $\overline{1+p_0}$ | |
| 1 0 3 2<br>3 2 0 1<br>2 3 1 0<br>0 1 2 3 | $s_{187}$ | Quasigroup<br>Right Identity | $\frac{\times}{3+p_0}$ | | | $\overline{p_0+1}$ | | | | $\overline{0+p_0}$ | | | | $\overline{p_0+0}$ | | | $\overline{p_0+3}$ | | | $\overline{2+p_0}$ | $\overline{p_0+2}$ | | | | $\overline{1+p_0}$ | |
| 1 0 3 2<br>3 2 1 0<br>0 3 2 1<br>2 1 0 3 | $s_{189}$ | Quasigroup | × | | | $\overline{p_0+1}$ | | $\overline{2+p_0}$ | | $\overline{0+p_0}$ | | | $\overline{p_0+0}$ | | $\overline{p_0+3}$ | | $\overline{3+p_0}$ | | | | | | | $\overline{p_0+2}$ | | $\overline{1+p_0}$ |
| 1 0 3 2<br>3 2 1 0<br>2 1 0 3<br>0 3 2 1 | $s_{190}$ | Quasigroup | × | | $\overline{p_0+1}$ | | | $\overline{3+p_0}$ | | $\overline{0+p_0}$ | | | | $\overline{p_0+0}$ | | $\overline{p_0+3}$ | $\overline{2+p_0}$ | | | | | | $\overline{p_0+2}$ | | | $\overline{1+p_0}$ |
| 1 2 0 3<br>0 1 3 2<br>2 3 1 0<br>3 0 2 1 | $s_{192}$ | Quasigroup | × | $\overline{1+p_0}$ | | | $\overline{p_0+2}$ | | $\overline{p_0+0}$ | | $\overline{0+p_0}$ | | | | | | | $\overline{p_0+1}$ | | $\overline{2+p_0}$ | | $\overline{3+p_0}$ | | | $\overline{p_0+3}$ | |
| 1 2 0 3<br>0 1 3 2<br>3 0 2 1<br>2 3 1 0 | $s_{193}$ | Quasigroup | × | $\overline{1+p_0}$ | | | | $\overline{p_0+2}$ | | $\overline{p_0+0}$ | $\overline{0+p_0}$ | | | | | | $\overline{p_0+1}$ | | | $\overline{3+p_0}$ | | $\overline{2+p_0}$ | | | | $\overline{p_0+3}$ |
| 1 2 0 3<br>0 3 1 2<br>2 0 3 1<br>3 1 2 0 | $s_{194}$ | Quasigroup | × | $\overline{p_0+2}$ | | | $\overline{1+p_0}$ | | $\overline{p_0+0}$ | | $\overline{0+p_0}$ | | | | | $\overline{2+p_0}$ | | | $\overline{p_0+1}$ | | | | | $\overline{3+p_0}$ | | $\overline{p_0+3}$ |
| 1 2 0 3<br>0 3 1 2<br>3 1 2 0<br>2 0 3 1 | $s_{197}$ | Quasigroup<br>Left Identity | $\frac{\times}{p_0+2}$ | | | | $\overline{1+p_0}$ | | | $\overline{p_0+0}$ | $\overline{0+p_0}$ | | | | | $\overline{3+p_0}$ | | | | $\overline{p_0+1}$ | | | | $\overline{2+p_0}$ | $\overline{p_0+3}$ | |
| 1 2 0 3<br>0 3 2 1<br>2 1 3 0<br>3 0 1 2 | $s_{198}$ | Quasigroup | × | | | $\overline{p_0+2}$ | | $\overline{1+p_0}$ | $\overline{p_0+0}$ | | $\overline{0+p_0}$ | | | | | | | $\overline{2+p_0}$ | | $\overline{p_0+1}$ | $\overline{3+p_0}$ | | $\overline{p_0+3}$ | | | |
| 1 2 0 3<br>0 3 2 1<br>3 0 1 2<br>2 1 3 0 | $s_{199}$ | Quasigroup | × | | $\overline{p_0+2}$ | | | $\overline{1+p_0}$ | | $\overline{p_0+0}$ | $\overline{0+p_0}$ | | | | | | | $\overline{3+p_0}$ | $\overline{p_0+1}$ | | $\overline{2+p_0}$ | | | $\overline{p_0+3}$ | | |
| 1 2 0 3<br>2 0 3 1<br>0 3 1 2<br>3 1 2 0 | $s_{200}$ | Quasigroup<br>Commutative | × | | | | $\frac{\overline{2+p_0}}{\overline{p_0+2}}$ | | | | $\frac{\overline{0+p_0}}{\overline{p_0+0}}$ | | | | | $\frac{\overline{1+p_0}}{\overline{p_0+1}}$ | | | | | | | | $\frac{\overline{3+p_0}}{\overline{p_0+3}}$ | | |
| 1 2 0 3<br>2 0 3 1<br>3 1 2 0<br>0 3 1 2 | $s_{201}$ | Quasigroup | × | | | | $\overline{3+p_0}$ | $\overline{p_0+2}$ | | | $\overline{0+p_0}$ | $\overline{p_0+0}$ | | | $\overline{p_0+1}$ | $\overline{1+p_0}$ | | | | | | | $\overline{p_0+3}$ | $\overline{2+p_0}$ | | |
| 1 2 0 3<br>2 1 3 0<br>0 3 2 1<br>3 0 1 2 | $s_{203}$ | Quasigroup<br>Commutative | × | | | | | $\frac{\overline{2+p_0}}{\overline{p_0+2}}$ | | | $\frac{\overline{0+p_0}}{\overline{p_0+0}}$ | | | | | | | $\frac{\overline{1+p_0}}{\overline{p_0+1}}$ | | | $\frac{\overline{3+p_0}}{\overline{p_0+3}}$ | | | | | |
| 1 2 0 3<br>2 1 3 0<br>3 0 1 2<br>0 3 2 1 | $s_{204}$ | Quasigroup | × | | | | $\overline{p_0+2}$ | $\overline{3+p_0}$ | | | $\overline{0+p_0}$ | $\overline{p_0+0}$ | | | | | $\overline{p_0+1}$ | $\overline{1+p_0}$ | | | $\overline{2+p_0}$ | $\overline{p_0+3}$ | | | | |
| 1 2 0 3<br>2 3 1 0<br>0 1 3 2<br>3 0 2 1 | $s_{206}$ | Quasigroup<br>Commutative | × | $\frac{\overline{2+p_0}}{\overline{p_0+2}}$ | | | | | | | $\frac{\overline{0+p_0}}{\overline{p_0+0}}$ | | | | | | | | | $\frac{\overline{1+p_0}}{\overline{p_0+1}}$ | | $\frac{\overline{3+p_0}}{\overline{p_0+3}}$ | | | | |
| 1 2 0 3<br>2 3 1 0<br>3 0 2 1<br>0 1 3 2 | $s_{207}$ | Quasigroup<br>Left Identity | $\frac{\times}{p_0+2}$ | $\overline{3+p_0}$ | | | | | | | $\overline{0+p_0}$ | $\overline{p_0+0}$ | | | | | | | $\overline{p_0+1}$ | $\overline{1+p_0}$ | $\overline{p_0+3}$ | $\overline{2+p_0}$ | | | | |
| 1 2 0 3<br>3 0 1 2<br>0 3 2 1<br>2 1 3 0 | $s_{208}$ | Quasigroup<br>Left Identity | $\frac{\times}{p_0+2}$ | | | | | $\overline{2+p_0}$ | | | $\overline{0+p_0}$ | | $\overline{p_0+0}$ | | | $\overline{p_0+1}$ | | $\overline{3+p_0}$ | | | $\overline{1+p_0}$ | | | | | $\overline{p_0+3}$ |
| 1 2 0 3<br>3 0 1 2<br>2 1 3 0<br>0 3 2 1 | $s_{209}$ | Quasigroup | × | $\overline{p_0+2}$ | | | | $\overline{3+p_0}$ | | | $\overline{0+p_0}$ | | | $\overline{p_0+0}$ | $\overline{p_0+1}$ | | | $\overline{2+p_0}$ | | | $\overline{1+p_0}$ | | | | $\overline{p_0+3}$ | |
| 1 2 0 3<br>3 0 2 1<br>0 1 3 2<br>2 3 1 0 | $s_{210}$ | Quasigroup | × | $\overline{2+p_0}$ | | $\overline{p_0+2}$ | | | | | $\overline{0+p_0}$ | | $\overline{p_0+0}$ | | $\overline{p_0+1}$ | | | | | $\overline{3+p_0}$ | | $\overline{1+p_0}$ | | $\overline{p_0+3}$ | | |
| 1 2 0 3<br>3 0 2 1<br>2 3 1 0<br>0 1 3 2 | $s_{213}$ | Quasigroup | × | $\overline{3+p_0}$ | $\overline{p_0+2}$ | | | | | | $\overline{0+p_0}$ | | | $\overline{p_0+0}$ | | $\overline{p_0+1}$ | | | | $\overline{2+p_0}$ | | $\overline{1+p_0}$ | $\overline{p_0+3}$ | | | |
| 1 2 0 3<br>3 1 2 0<br>0 3 1 2<br>2 0 3 1 | $s_{214}$ | Quasigroup | × | | $\overline{p_0+2}$ | | $\overline{2+p_0}$ | | | | $\overline{0+p_0}$ | | $\overline{p_0+0}$ | | | $\overline{3+p_0}$ | | $\overline{p_0+1}$ | | | | $\overline{p_0+3}$ | | | $\overline{1+p_0}$ | | |
| 1 2 0 3<br>3 1 2 0<br>2 0 3 1<br>0 3 1 2 | $s_{215}$ | Quasigroup | × | | | $\overline{p_0+2}$ | $\overline{3+p_0}$ | | | | $\overline{0+p_0}$ | | | $\overline{p_0+0}$ | | $\overline{2+p_0}$ | $\overline{p_0+1}$ | | | | $\overline{p_0+3}$ | | | | $\overline{1+p_0}$ | | |
| 1 2 3 0<br>0 1 2 3<br>2 3 0 1<br>3 0 1 2 | $s_{216}$ | Quasigroup<br>Right Identity | $\frac{\times}{1+p_0}$ | | | | $\overline{p_0+3}$ | | $\overline{p_0+0}$ | | | $\overline{0+p_0}$ | | | | | | $\overline{p_0+1}$ | $\overline{2+p_0}$ | | $\overline{3+p_0}$ | | | | | $\overline{p_0+2}$ | |
| 1 2 3 0<br>0 3 1 2<br>2 1 0 3<br>3 0 2 1 | $s_{218}$ | Quasigroup | × | | | $\overline{p_0+3}$ | $\overline{1+p_0}$ | | $\overline{p_0+0}$ | | | $\overline{0+p_0}$ | | | | | $\overline{2+p_0}$ | | | $\overline{p_0+1}$ | | $\overline{3+p_0}$ | $\overline{p_0+2}$ | | | |
| 1 2 3 0<br>0 3 1 2<br>3 0 2 1<br>2 1 0 3 | $s_{219}$ | Quasigroup | × | | $\overline{p_0+3}$ | | $\overline{1+p_0}$ | | | $\overline{p_0+0}$ | | $\overline{0+p_0}$ | | | | | $\overline{3+p_0}$ | | $\overline{p_0+1}$ | | | $\overline{2+p_0}$ | | $\overline{p_0+2}$ | | |
| 1 2 3 0<br>0 3 2 1<br>2 0 1 3<br>3 1 0 2 | $s_{220}$ | Quasigroup | × | $\overline{p_0+3}$ | | | | $\overline{1+p_0}$ | $\overline{p_0+0}$ | | | $\overline{0+p_0}$ | | | $\overline{2+p_0}$ | | | | $\overline{p_0+1}$ | | | | $\overline{3+p_0}$ | | | $\overline{p_0+2}$ |
| 1 2 3 0<br>0 3 2 1<br>3 1 0 2<br>2 0 1 3 | $s_{223}$ | Quasigroup<br>Left Identity | $\frac{\times}{p_0+3}$ | | | | | $\overline{1+p_0}$ | | $\overline{p_0+0}$ | | $\overline{0+p_0}$ | | | $\overline{3+p_0}$ | | | | | $\overline{p_0+1}$ | | | $\overline{2+p_0}$ | | $\overline{p_0+2}$ | |
| 1 2 3 0<br>2 0 1 3<br>0 3 2 1<br>3 1 0 2 | $s_{224}$ | Quasigroup | × | | | | $\overline{p_0+3}$ | $\overline{2+p_0}$ | | | $\overline{p_0+0}$ | $\overline{0+p_0}$ | | | $\overline{1+p_0}$ | $\overline{p_0+1}$ | | | | | | | $\overline{3+p_0}$ | $\overline{p_0+2}$ | | |
| 1 2 3 0<br>2 0 1 3<br>3 1 0 2<br>0 3 2 1 | $s_{225}$ | Quasigroup<br>Commutative | × | | | | | $\frac{\overline{3+p_0}}{\overline{p_0+3}}$ | | | | $\frac{\overline{0+p_0}}{\overline{p_0+0}}$ | | | $\frac{\overline{1+p_0}}{\overline{p_0+1}}$ | | | | | | | | $\frac{\overline{2+p_0}}{\overline{p_0+2}}$ | | | |
| 1 2 3 0<br>2 1 0 3<br>0 3 1 2<br>3 0 2 1 | $s_{226}$ | Quasigroup | × | | | | $\overline{2+p_0}$ | $\overline{p_0+3}$ | | | $\overline{p_0+0}$ | $\overline{0+p_0}$ | | | | | $\overline{1+p_0}$ | $\overline{p_0+1}$ | | | $\overline{p_0+2}$ | $\overline{3+p_0}$ | | | | |
| 1 2 3 0<br>2 1 0 3<br>3 0 2 1<br>0 3 1 2 | $s_{229}$ | Quasigroup<br>Commutative | × | | | | $\frac{\overline{3+p_0}}{\overline{p_0+3}}$ | | | | | $\frac{\overline{0+p_0}}{\overline{p_0+0}}$ | | | | | $\frac{\overline{1+p_0}}{\overline{p_0+1}}$ | | | | | $\frac{\overline{2+p_0}}{\overline{p_0+2}}$ | | | | |
| 1 2 3 0<br>2 3 0 1<br>0 1 2 3<br>3 0 1 2 | $s_{230}$ | Quasigroup<br>Right Identity | $\frac{\times}{2+p_0}$ | $\overline{p_0+3}$ | | | | | | | $\overline{p_0+0}$ | $\overline{0+p_0}$ | | | | | | | $\overline{1+p_0}$ | $\overline{p_0+1}$ | $\overline{3+p_0}$ | $\overline{p_0+2}$ | | | | |
| 1 2 3 0<br>3 0 1 2<br>0 1 2 3<br>2 3 0 1 | $s_{232}$ | Quasigroup<br>Right Identity | $\frac{\times}{2+p_0}$ | | | $\overline{p_0+3}$ | | | | | | $\overline{0+p_0}$ | $\overline{p_0+0}$ | | $\overline{p_0+1}$ | | | | $\overline{3+p_0}$ | | $\overline{1+p_0}$ | | | $\overline{p_0+2}$ | | |
| 1 2 3 0<br>3 0 1 2<br>2 3 0 1<br>0 1 2 3 | $s_{235}$ | Quasigroup<br>Right Identity | $\frac{\times}{3+p_0}$ | | $\overline{p_0+3}$ | | | | | | | $\overline{0+p_0}$ | | $\overline{p_0+0}$ | | $\overline{p_0+1}$ | | | $\overline{2+p_0}$ | | $\overline{1+p_0}$ | | $\overline{p_0+2}$ | | | |
| 1 2 3 0<br>3 0 2 1<br>0 3 1 2<br>2 1 0 3 | $s_{236}$ | Quasigroup<br>Left Identity | $\frac{\times}{p_0+3}$ | | | | $\overline{2+p_0}$ | | | | | $\overline{0+p_0}$ | $\overline{p_0+0}$ | | | $\overline{p_0+1}$ | $\overline{3+p_0}$ | | | | | $\overline{1+p_0}$ | | | | $\overline{p_0+2}$ |
| 1 2 3 0<br>3 0 2 1<br>2 1 0 3<br>0 3 1 2 | $s_{237}$ | Quasigroup | × | $\overline{p_0+3}$ | | | $\overline{3+p_0}$ | | | | | $\overline{0+p_0}$ | | $\overline{p_0+0}$ | $\overline{p_0+1}$ | | $\overline{2+p_0}$ | | | | | $\overline{1+p_0}$ | | | $\overline{p_0+2}$ | |
| 1 2 3 0<br>3 1 0 2<br>0 3 2 1<br>2 0 1 3 | $s_{238}$ | Quasigroup | × | | $\overline{p_0+3}$ | | | $\overline{2+p_0}$ | | | | $\overline{0+p_0}$ | $\overline{p_0+0}$ | | $\overline{3+p_0}$ | | | $\overline{p_0+1}$ | | | | $\overline{p_0+2}$ | $\overline{1+p_0}$ | | | |
| 1 2 3 0<br>3 1 0 2<br>2 0 1 3<br>0 3 2 1 | $s_{239}$ | Quasigroup | × | | | $\overline{p_0+3}$ | | $\overline{3+p_0}$ | | | | $\overline{0+p_0}$ | | $\overline{p_0+0}$ | $\overline{2+p_0}$ | | $\overline{p_0+1}$ | | | | $\overline{p_0+2}$ | | $\overline{1+p_0}$ | | | |
| 1 3 0 2<br>0 1 2 3<br>2 0 3 1<br>3 2 1 0 | $s_{240}$ | Quasigroup<br>Right Identity | $\frac{\times}{1+p_0}$ | | | $\overline{p_0+2}$ | | | $\overline{p_0+0}$ | | | | $\overline{0+p_0}$ | | | $\overline{2+p_0}$ | | | | $\overline{p_0+3}$ | | | $\overline{p_0+1}$ | | | $\overline{3+p_0}$ |

| | | |

| | | |

| | | |

| | | |

| | | |

| | | |